IS OFFICE 2004 WORTH THE UPGRADE?

SEE OUR IN-DEPTH REVIEWS OF WORD, EXCEL, ENTOURAGE, AND POWERPOINT, p. 28

Macworld

The Mac Product Experts www.macworld.com | August 2004

12-PAGE HOW-TO GUIDE

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Watch and Record TV Digitally on Your Mac

Add a SuperDrive to the TiBook

Turn an Old Laptop into a Digital Picture Frame

Build Your Own Mega Music Server

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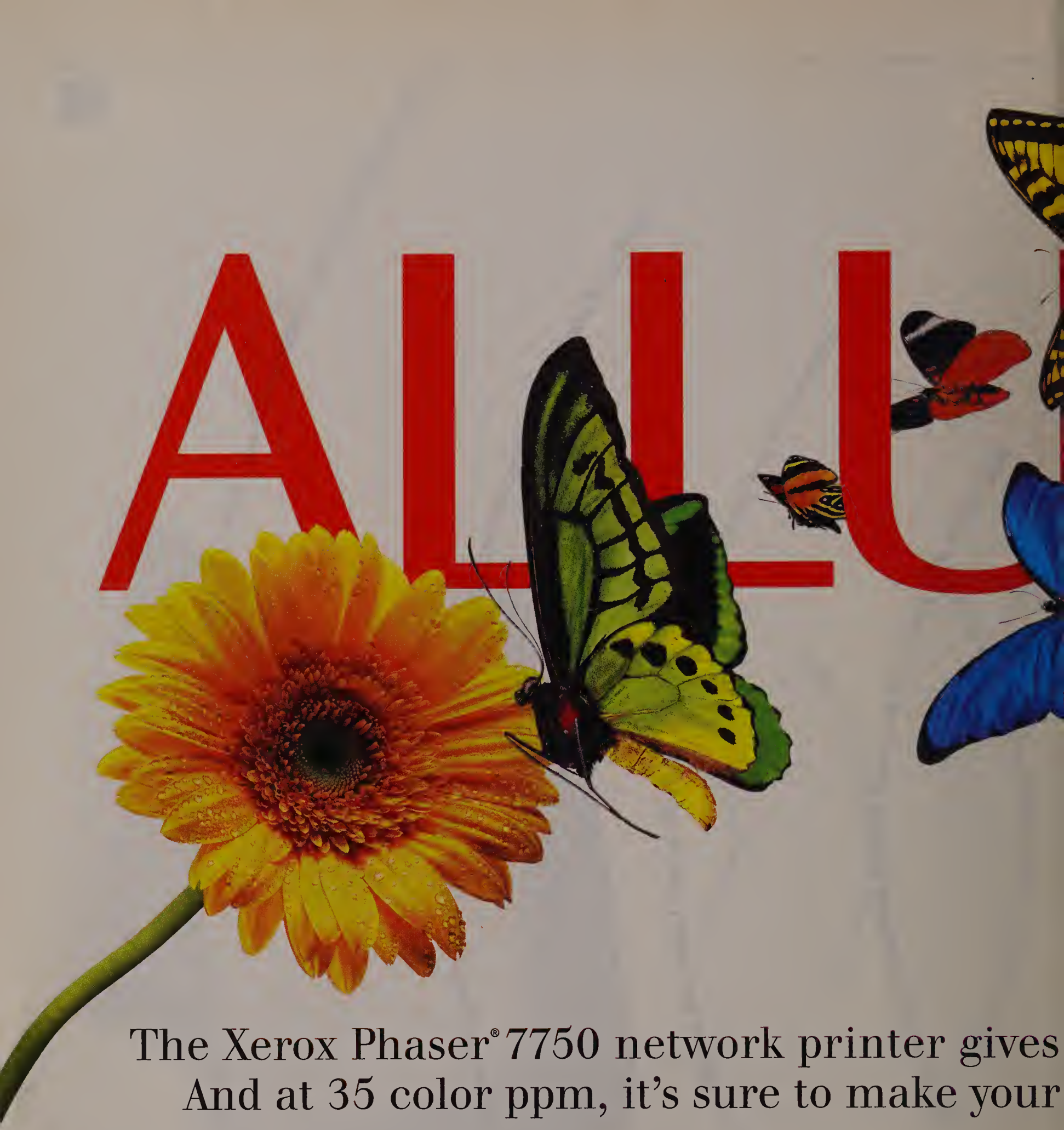

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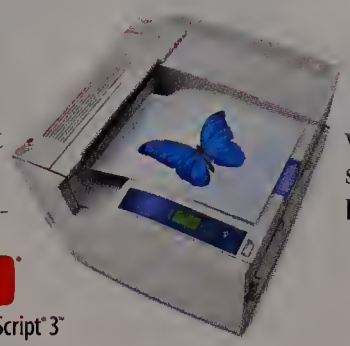

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Macworld

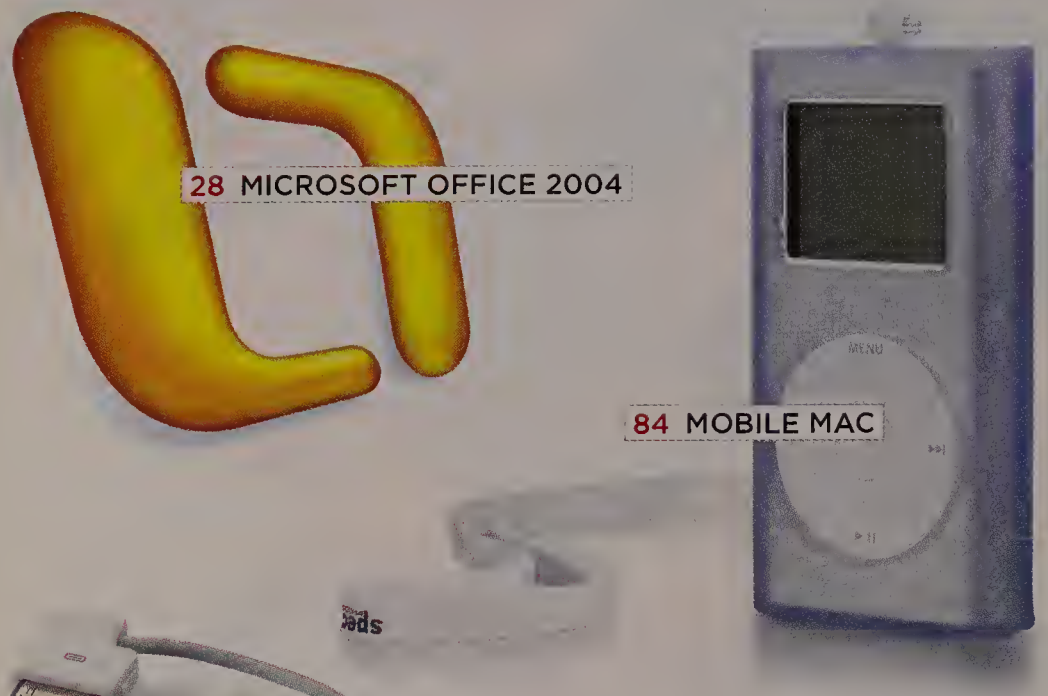
OPINION

9 **From the Editor's Desk**
JASON SNELL
Before focusing on improving old hardware, check out Apple's new hardware releases.

15 **Feedback**
Readers respond.

MAC BEAT

18 *Macworld*'s guide to Web mail services; the iPod PDA?; geeky iPod hacks; the new QuarkVista XTension; Mac developers and free lifetime-upgrade offers.



On the Cover
Illustration by Paul Howalt; Office 2004 packaging photo by Peter Belanger

The Virtual CD

Subscribers now have free access to the contents of the CD-ROM that comes with newsstand copies of *Macworld*. To view the contents of the CD, go to the following URL (broadband Internet recommended): **http://cd.macworld.com/2004/08/lamp-backup**

REVIEWS

28 **Microsoft Office 2004**
- Entourage 2004
- Excel 2004
- PowerPoint 2004
- Word 2004

36 **Midlevel scanners**
- Canon CanoScan 9900F
- Epson Perfection 4870 Photo
- Hewlett-Packard Scanjet 8200
- Microtek ScanMaker i900
- Umax PowerLook 1000

38 **Network-management package**
- IPNetMonitorX 1.4

41 **Landscape-generation app**
- ArtMatic Voyager 1.1.2

42 **PowerBook SuperDrive**
- OWC Mercury Ti SuperDrive 4×

42 **Portable floppy drive**
- LaCie USB Pocket Floppy 4×

43 **PDA software**
- PocketMac Pro 3.3

44 **CSS editors**
- CSSEdit 1.6.3
- Style Master 3.5

45 **Lexicon software**
- Word Menu 2.2

46 **Scriptwriting package**
- Final Draft 7

47 **Color-proofing utility**
- ProofMaster Adesso

49 **The Game Room**
PETER COHEN
This month we offer challenging adventures for everyone in the family, with Command & Conquer Generals, Riddle of the Sphinx II, Didi & Ditto Kindergarten, and Pharaoh's Gold, as well as a first look at Shrek 2: The Game.

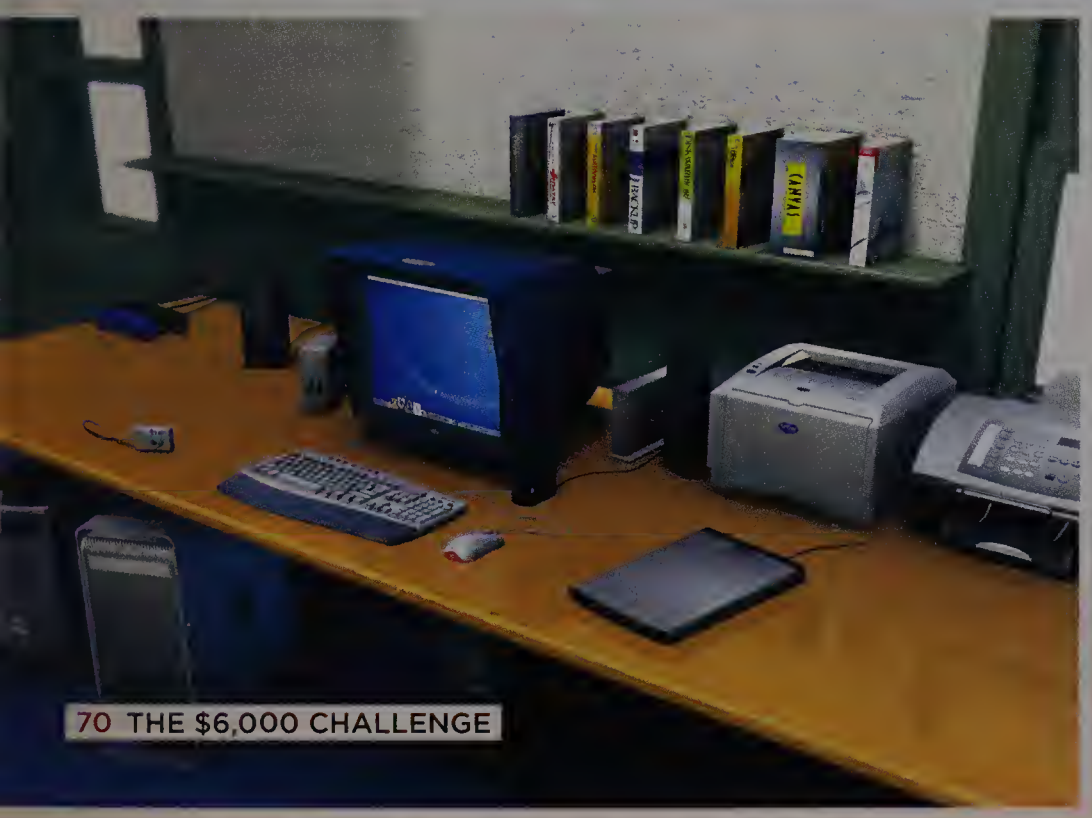
55 **Mac Gems**
DAN FRAKES
View keyboard commands inside any app, search your browser's history more efficiently, add functionality to OS X's built-in disc burning, find damaged preference files, gain fast access to often-typed bits of information, and turn copied text into plain text.

COVER STORY

58 **The Next Do-It-Yourself Mac**
Is your Mac less than ideal? Upgrade and expand it—and other Mac-related hardware—using this massive collection of how-tos.

FEATURE

70 **Macworld's $6,000 Challenge**
CHRISTOPHER BREEN AND ADAM C. ENGST
Just how far does $6,000 go these days? To find out, we ordered two savvy Mac shoppers to assemble the perfect Mac-based home office—and to do it under budget.



SECRETS

76 WORKING MAC
Online Banking Made Easy
FRANKLIN N. TESSLER
Banking online with Quicken frees you from mailing checks and typing in transactions, but it's not a trouble-free process. We show you how to sidestep problems while you keep an eye on your money.

78 DIGITAL HUB
Create Your Own Music Video
JIM HEID
MTV, here you come! Combine video clips, still photos, iMovie transitions, and a soundtrack for a dynamic slide show or even your own music video.

80 CREATE
Illustration in Three Dimensions
FRITH GOWAN
Digital artist Rob Magiera uses a 3-D application to create unique two-dimensional illustrations. Take a peek into his process.

84 MOBILE MAC
Put a Case on It
DAN FRAKES AND FRITH GOWAN
Whether you want basic scratch protection or full-on shock absorption for your iPod or iPod mini, we've got a case for you.

88 GEEK FACTOR
Hasta la Vista, Aqua
CYRUS FARIVAR
Replace OS X's familiar interface with the K Desktop Environment, and run open-source and free alternatives to Mac applications.

90 HELP DESK
Mac OS X Hints
ROB GRIFFITHS
Display all of Microsoft Word's keyboard shortcuts, speak text in any app, use AppleScript to open a folder in Terminal, change the behavior of iTunes 4.5's new arrows, and zoom in and out of Word documents using a scroll wheel.

92 **Mac 911**
CHRISTOPHER BREEN
This month we tackle misplaced iMovie titles, wimpy GarageBand tracks, bland TextEdit documents, and disappearing iTunes playlists.

BACK PAGE

120 **Hot Stuff**
Check out our editors' favorite developments of the month.

The Ultimate Mac Vacation/Conference Experience

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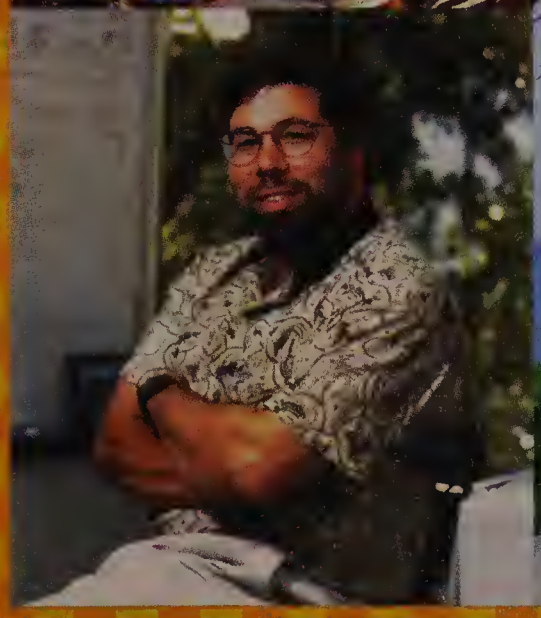
Speakers: Jesse Feiler, Laura Gutman, Janet Hill, Leo Laporte, Deke McClelland, David Pogue, Mark L. Rubinstein, Joe Schorr, Jason Snell, Sal Soghoian, and Steve Wozniak

Geek Cruises: *Education That Takes You Places*



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DAY	PORT	ARRIVE	DEPART
Sun., Nov. 7, 2004	Ft. Lauderdale, Florida		5:00 pm
Mon., Nov. 8, 2004	Nassau, Bahamas	7:00 am	Noon
Tues., Nov. 9, 2004	Cruising the Caribbean Sea		
Wed., Nov. 10, 2004	Philipsburg, St. Maarten	10:00 am	6:00 pm
Thurs., Nov. 11, 2004	Road Town, Tortola	7:00 am	4:00 pm
Fri., Nov. 12, 2004	Cruising the Caribbean Sea		
Sat., Nov. 13, 2004	Half Moon Cay, Bahamas	8:00 am	4:00 pm
Sun., Nov. 14, 2004	Ft. Lauderdale, Florida	8:00 am	

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Hardware Everywhere

The Internet has changed everyone's view of what timeliness really means. In the old days, *Macworld* would be on top of things if new Apple products appeared in these pages within a few weeks of their release. In 2004, even a week's delay means we're an entire week behind the information that readers can find online.

As we went to press with this issue of *Macworld*, Apple announced the new AirPort Express and a new round of faster Power Mac G5s (see page 24). By the time you read this issue, those announcements will have been trumped by whatever Apple unveils at its annual Worldwide Developers Conference (WWDC).

This issue goes to press before the June conference begins. But we'll use our Web sites, Macworld.com and MacCentral.com, to provide you with as much information as we can about that event as quickly as we can. After all, we had extensive online coverage of the AirPort Express and the new Power Mac G5s as soon as they debuted.

Six Ideas in One

In true Apple fashion, the AirPort Express is a half-dozen ideas rolled together into one small white plastic box. What you get is an AirPort Base Station, a wireless relay, a music streamer for stereos and powered speakers, a wireless print server, and more.

The AirPort Express's most intriguing feature is its audio-out jack. When connected to a remote base station, the AirPort Express becomes a wireless music streamer, playing your iTunes music on any set of speakers within range. This innovation clearly marks the first step in a whole series of home audio–related advances from Apple. For instance, as a user of Slim Devices' Squeezebox (★★★★; April 2004), I really appreciate having a small handheld remote control for choosing, playing, and pausing my music without having to move a mouse. Although programs such as Salling Software's Salling Clicker can help you control iTunes remotely, I suspect the AirPort Express's arrival means Apple will dive into this area rather soon.

Fast Times

Last year about this time, Apple said its new G5s would attain speeds of 3GHz by this summer. Unforeseen hitches in the ultra-high-tech process that produces the G5 chip have made it impossible to hit that milestone. On the bright side, Apple's new liquid-cooled 2.5GHz Power Mac G5 takes the company halfway to its 3GHz goal. And while all Mac users who expected to be blown away by a 1GHz speed boost in a year's time have a right to be disappointed, a 25 percent improvement in clock speed isn't something we should scoff at.

Apple's new dual-processor G5s all appear to offer speed boosts that power-hungry pro users will truly appreciate. I'm not sure if I'm as excited about the slightly faster G5s as I am about the AirPort Express, but 500MHz of new speed per processor will satisfy me just fine.

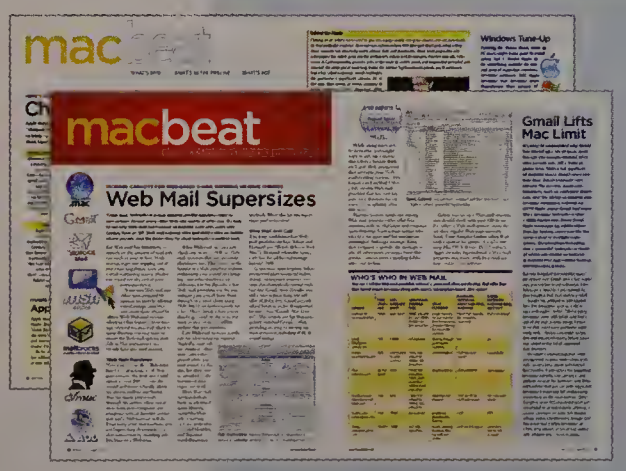
All Projects, Big and Small

Life as a Mac user isn't all about new Apple products, however. This month's cover story, "The Next Do-It-Yourself Mac" (page 58), is a collection of step-by-step guides and idea-generating tips that will help you change or add to your Mac hardware. The story tackles topics from the simple—setting up your Mac as a fax-machine replacement—to the complex—installing a SuperDrive in an old Titanium PowerBook. I hope that some of the tips and tricks strike your fancy and motivate you to make some improvements to the way you work with your Mac. □

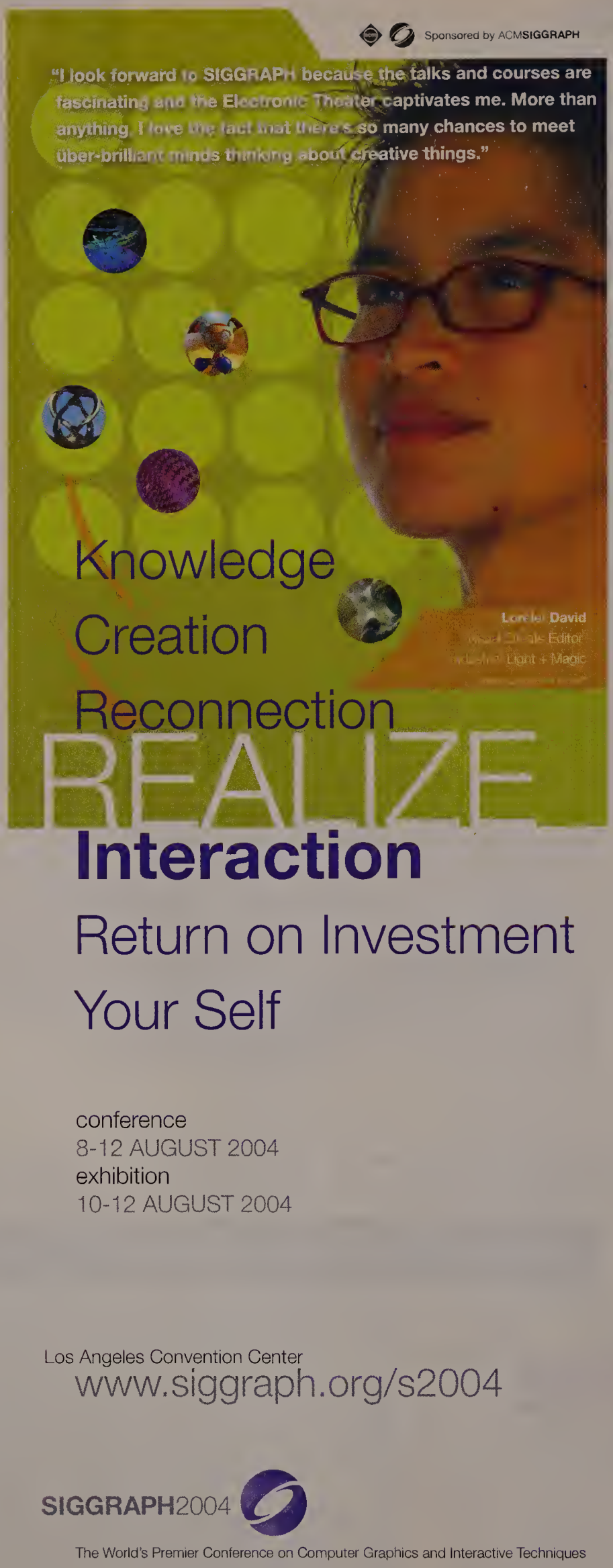
I'd love to hear what you think about the AirPort Express or Apple's latest Power Mac updates. Let me know at jason_snell@macworld.com or at www.macworld.com/forums.

PORTRAIT BY PETER BELANGER

About This Macworld



You may have noticed that *Macworld* looks a little different this month. In fact, Art Director Jennifer Steele and Senior Designer Amy Helin have been making small changes to the magazine for months, starting with our *Mac Beat* and *Hot Stuff* sections and rolling out the rest of the magazine with this issue. The changes we've made aren't *too* dramatic—although we've standardized the headline type, the body type remains unchanged—but they should help make the magazine a bit easier to read and more unified.



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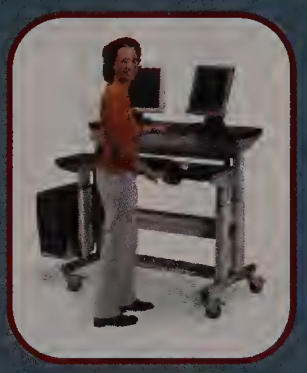

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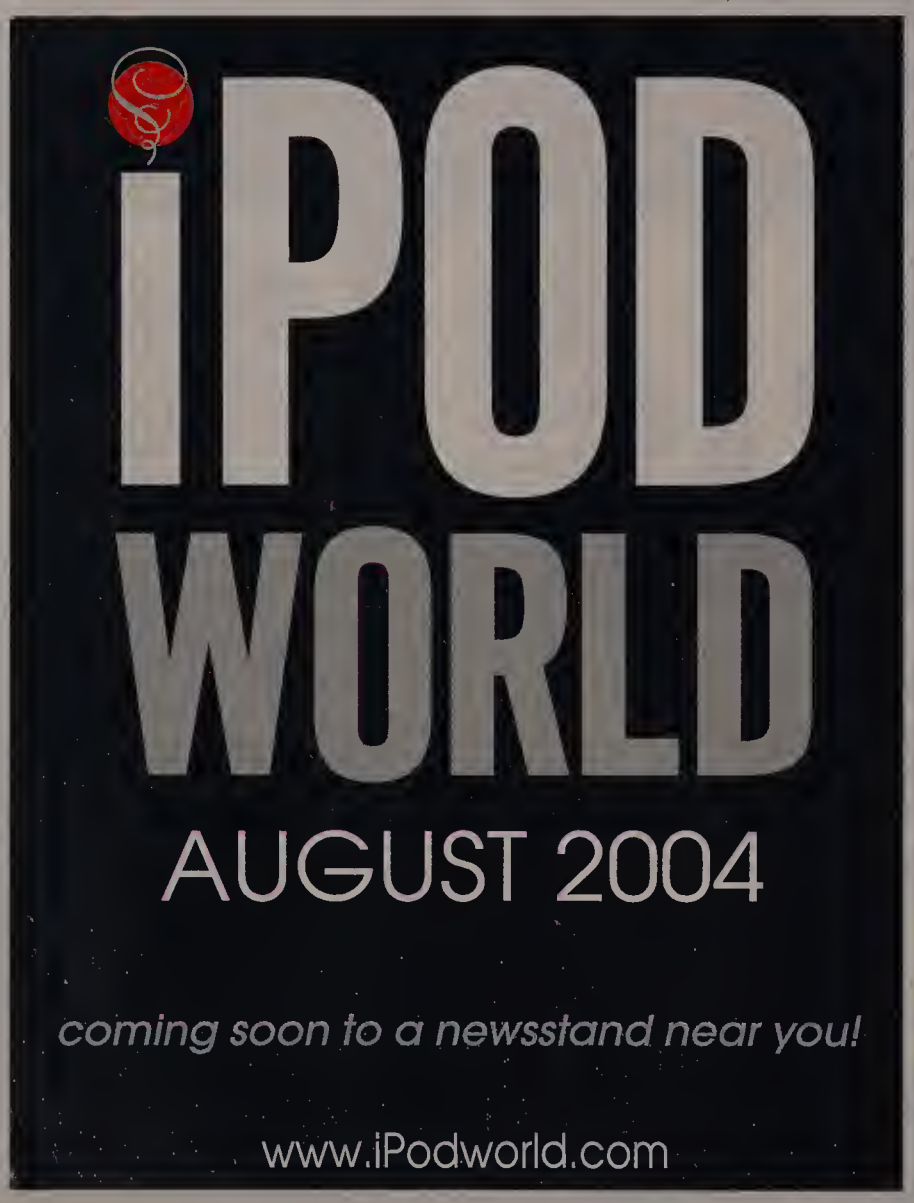

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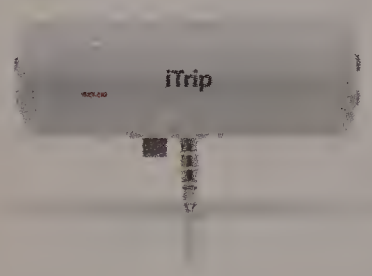

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FEEDBACK

Fresh Perspectives

Our May 2004 issue made reader Chuck Provancher "want to run out and buy all 450 products you rated. But where can I purchase the refrigerator-size iPod mini depicted on the cover? And will it preserve Meat Loaf songs longer than a normal-size iPod will?" Chuck, the iPod mini remains only 3.6 inches tall, smaller than most refrigerators. As for the other 449 products, there's always the Apple Store, the mere mention of which in Jason Snell's column provoked enough mail to fill a refrigerator-size iPod.

Super Geniuses

RICK NEWELL

I enjoyed "Geniuses behind Bars" (*From the Editor's Desk*, May 2004). I was a lifetime PC user until December 2002. My Toshiba Infinia was on its last legs, and I was looking for a new PC. While shopping at the Kenwood Towne Centre in Cincinnati, I came across the Apple Store. I remembered seeing the ads for the iMac and thought they looked pretty cool. After talking to some Apple employees, I realized that I could make the switch. I bought my 20-inch iMac, got a free Hewlett-Packard printer, and bought an iPod. I use my Mac in ways that I never imagined using my PC. I would not be a Mac user without the Apple Store.

ALLISON LASS

Last fall, I decided that I needed to replace my old, hand-me-down Mac. So I went to the Apple Store at the Grove in Los Angeles. It was a great experience—no hard sell from the sales associates, just lots of information about the computers, their value, their ease of use, and all their capabilities. In December, I once again visited an Apple Store, this time in Santa Monica, California. I was getting desperate, as my hand-me-down was really having problems and making my work from home frustrating. My experience at this second store was again great and insightful. I decided to get the 15-inch iMac; however, I was not quite ready to buy. A friend reminded me that Orange County has a lower sales tax than Los Angeles. So later that month, I went to my third Apple Store, in Costa Mesa, California, and made my purchase. My salesperson was great: knowledgeable, helpful, easy to work with. All in all, it was a great experience.

Not-So-Super Geniuses

JESSE LEO

Maybe it was just bad luck on my part. Or maybe visiting on a weekend (when the store is mobbed) was a mistake. But both of my visits to the SoHo Apple Store left me with a bad taste in my mouth. Don't get me wrong—the store itself is fantastic. It's the teenybopper employees clad in black T-shirts that ruined it for me on both trips. Every time I asked for assistance or for a short demo, they acted as if I was inconveniencing them terribly. Questions did get answered, but with just enough information to qualify as an answer. And the whole time they avoided making eye contact. The expression of abject boredom on their faces was really discouraging, especially since both times I was accompanied by potential Wintel converts.

DAN SLAVEN

Apple Geniuses, my eye! After finding out that Apple will not sell me replacement feet for my iBook, I took it to the Apple Store in Tyson's Corner Mall in Virginia. The Apple "Genius" did his best to destroy my iBook in the process of jamming and hammering three replacement feet into the iBook's case, leaving me with three crooked and misaligned feet. I will never go inside an Apple Store again. I will go back to my favorite mom-and-pop Apple specialist for service and support needs.

Pepsi Promo Fizzles

BOB HAENN

I am a Pepsi drinker and an iTunes purchaser, so I rejoiced at the announcement of the iTunes promotion ("A Little Soda-Drinking Music, Please," *Mac Beat*, May 2004). Unfortunately, Apple and Pepsi have ignored Philadelphia and the southeast Pennsylvania region entirely. *Macworld* might want to do some investigative reporting. Which regions received the yellow caps? How many yellow caps were screwed onto Pepsi bottles, and how many were redeemed at iTunes? Is Steve Jobs aware of the lack of availability of the yellow caps? What does Apple have against Pennsylvania? Why was William Hung allowed to make a CD? Why did I pay 99 cents to purchase William Hung's version of "Hotel California"? There are so many unanswered questions.

Missing the Big Picture

JEDEDIAH LEACHMAN

Adam C. Engst's iPhoto 4 article ("iLife '04: How Does It Stack Up?" May 2004) seemed to acknowledge that iPhoto was more successful as a marketing trinket for Apple than as a serious photo manager. He wrote that it "lacks features you'd expect from a serious photo manager" and "still lacks a quick and easy way to download just one or two photos from a larger set." In my opinion, a ♦♦♦½ rating was unnecessarily generous. Apple is not incapable of selling mediocre software from time to time. It's a shame the rating doesn't reflect Apple's many missed opportunities to fully develop this widely disseminated software, since Apple has known what its customers need and how to implement it for years now.

Snapz Pro Not a Snap

JOHN FAIRWEATHER

I was very surprised by Dan Frakes's perfect ♦♦♦♦♦ rating for Snapz Pro X 2.0 (*Mac Gems*, May 2004). It's a great utility and I use it often, but it's awkward, has an obtrusive interface, and limits file-save locations to a predefined list. The interface's fade-out

continues

and fade-in effect can cause you to miss a shot, and you can't access the desktop or other apps without closing Snapz Pro first, so multiple successive shots may require multiple relaunches.

Synchronizing Swimmingly

TOM MAY

Christopher Breen's instructions on how to sync a single iPod with the iTunes libraries on different Macs was a godsend ("Focus on the iPod," May 2004). My 17-inch iMac has an irritating habit of hanging during the iPod syncing process. As I've concluded that the problem is most likely a temperamental FireWire bus (and thankfully not the iPod itself), I can now use my older iMac DV to sync my iPod and not worry about its smaller 30GB disk space cramping my style. Since my 17-inch iMac has an 80GB drive and a fast SuperDrive, I can continue feeding it my massive CD collection and at a much faster import rate, knowing that the tunes will make it to my iPod easily. I can also use my iMac DV to digitize my large LP collection without having to transfer the imported tracks to the larger, faster iMac. The slower iMac is better situated for directly connecting to my turntable. Triple thanks for an extremely helpful tip. I'm in iTunes heaven.

Missing the Music

JIM FELBAB

I was stunned that "Banding Together" (*Mac Beat*, May 2004) omitted the best GarageBand support site out there, www.macidol.com. This site has among the highest number of tunes hosted, the nicest music management, and even a store where musicians can sell their work.

All Fixed Up

MARK W. CLARK

I have an iBook with a logic board problem that made the LCD panel fail. My iBook was almost a year out of warranty and Apple repaired it and paid the shipping both ways. I didn't have to pay a cent out of pocket. Apple also upgraded my operating system to Panther at no charge. All this took place in less than two weeks. I want to thank you for "Mac Users in a Fix" (*Mac Beat*, April 2004), because without it, I would have paid for my iBook repairs. I wouldn't even have called Apple, with my iBook almost a year out of warranty.

Since our article appeared, Apple has extended the scope of its logic-board repair program to include iBooks made from May 2002 to October 2003 with serial numbers ranging from UV220XXXXXX to UV342XXXXXX. Go to find.macworld.com/0013 for more on Apple's repair program.—Ed.

In Support of Scripts

BILL WARREN

While I don't necessarily refute any of the points made in Franklin N. Tessler's review of PDFpen (3½; April 2004), it didn't mention what I consider the utility's indispensable feature—great AppleScriptability. I recently created an entire workflow to extract single or multipage PDF documents from one large scanned-to-PDF file, all based on criteria in an Excel spreadsheet. The PDFpen sample AppleScripts had me up and running in no time.

Defending Dragon Burn

DAVID YAO (EXECUTIVE VICE PRESIDENT, NEWTECH INFOSYSTEMS)

We take issue with some of the points Christopher Breen made in his Dragon Burn review (3½; May 2004), specifically his statement that multisession burning with Dragon Burn "is not an option for DVD-R discs and doesn't work properly with DVD-RW media." We feel that multisession writing to DVD-R is an important feature for Mac users; after all, it's a feature Windows users already enjoy. To simply say we failed to deliver for Mac users is certainly not the case. Regarding Breen's statement that his recorder can't play multisession DVD-RW discs, only Panther has this problem, which both Apple developers and we are aware of, and we are jointly working toward a solution. It's also only an issue if the files are written in HFS. If the file system is ISO or UDF, the disc can be read perfectly. This problem doesn't exist for Jaguar users. The multisession DVD-RW disc that cannot be read in a DVD-RW burner can be read in a DVD-ROM or DVD+R/RW burner under Panther and under other Mac OSs.

Breen's review also noted two issues—noise resulting from conversion of AAC audio tracks, and problems with renaming when converting audio tracks. NTI was aware of both these issues, and Dragon Burn users were able to download and use the fixes even before the review appeared.

We feel the grading of Dragon Burn was totally unwarranted, since the shortcomings were really OS and format limitations, which your reviewer should have understood, and two audio bugs, which received our immediate attention.

Regardless of who gets blamed, Dragon Burn won't burn DVD-R and -RW media as promised, and won't burn DVD-RW discs with Panther or with HFS+. Also, the product's shortcomings were hardly limited to features impacted by the OS and format limitations—for example, the AAC conversion problems and the nonsense characters that replaced song titles. Finally, my review could not cover any changes made after version 3.1.17—a version I took great care to examine the very day the review went to press.—Christopher Breen

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CORRECTIONS

"Out of Frame" (*Mac Beat,* June 2004) had an incorrect date for when Adobe will stop offering technical support for FrameMaker. Adobe plans to offer technical support through April 2005.

In our Adobe PageMaker Plug-in Pack review (June 2004), we stated the bullet type cannot be selected. In fact, you can use other symbols as bullets. Hold down the option key and click on the Bullets icon in the PageMaker toolbar.

"USB Joins the Chat" (*Mac Beat,* May 2004) incorrectly reported that iChatUSBCam would be bundled with Macally's IceCam. Instead, IceCam buyers will receive a $5 discount on the $10 iChatUSBCam.

Our review of Peak 4.1 (May 2004) incorrectly reported that the program lacked contextual menus. Peak uses the Apple standard (⌘-click) for its own purposes (audio scrubbing). Its contextual-menu command is control-shift-click.

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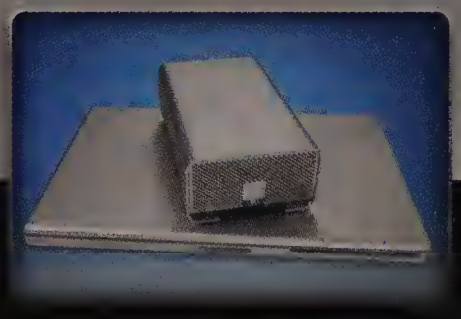

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AS STORAGE CAPACITY FOR WEB-BASED E-MAIL EXPANDS, SO DO CHOICES

Web Mail Supersizes

These days, Web-based e-mail services are like opinions—they're everywhere. Almost every other Web site seems to offer one. It's easy to see why Web mail has become so popular, even with users who already have an ISP. Web mail lets you read and send e-mail no matter where you are. And the price—free for most services—is hard to beat.

But Web mail has limitations—namely on the amount of mail you can stash in your in-box. With storage capacities topping out at just a few megabytes, even one e-mail containing several photos can crowd out the rest of your correspondence.

Some new Web mail providers have loosened the squeeze on users by offering e-mail storage capacities that dwarf those offered by others. With Web mail services adopting other features, from message retrieval via an e-mail client to spam filtering, you may want to review the Web mail options available to Mac users, even if you already have an e-mail account.

Web Mail Rundown

Web mail is basically a Web interface for your e-mail. In all Web mail services, the host, not a mail server at your ISP, receives the e-mail and stores it locally (there are always mailbox size limits). You can access your e-mail through the service when you're away from your computer; any computer with an Internet connection and a Web browser will do. Even using your own machine, you can bypass long downloads on a slow connection by scanning subject lines on a Web page.

A few Web mail services can check one or more POP or Web mail accounts that you maintain elsewhere, too. This gives you the benefit of a Web interface without redirecting your e-mail or changing your other mailboxes or addresses. On the flip side, a few Web mail providers also let you retrieve your e-mail from them through an e-mail client using POP, IMAP, or both—usually for a fee. This is handy when you're checking e-mail on the road but want to store it in one offline archive that you maintain.

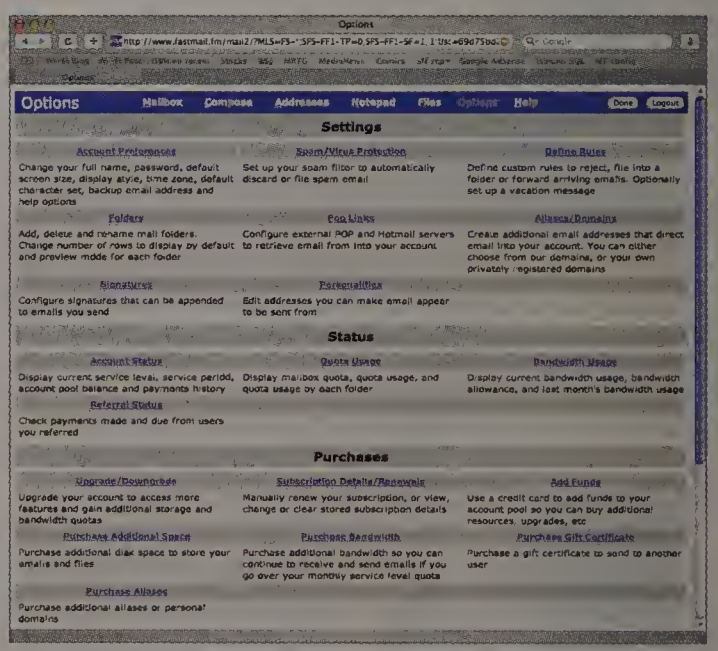
Free Web mail services usually rely on advertising for support. Typically, such ads are minimal—they aren't often displayed while you read e-mail via the site, but they may be attached to the bottom of messages you send.

Most Web mail services include basic or advanced spam filtering, using blocklists, self-reporting options, your own personal blacklist, and Bayesian word-frequency methods. Most also let you report spam you've received.

Web Mail Roll Call

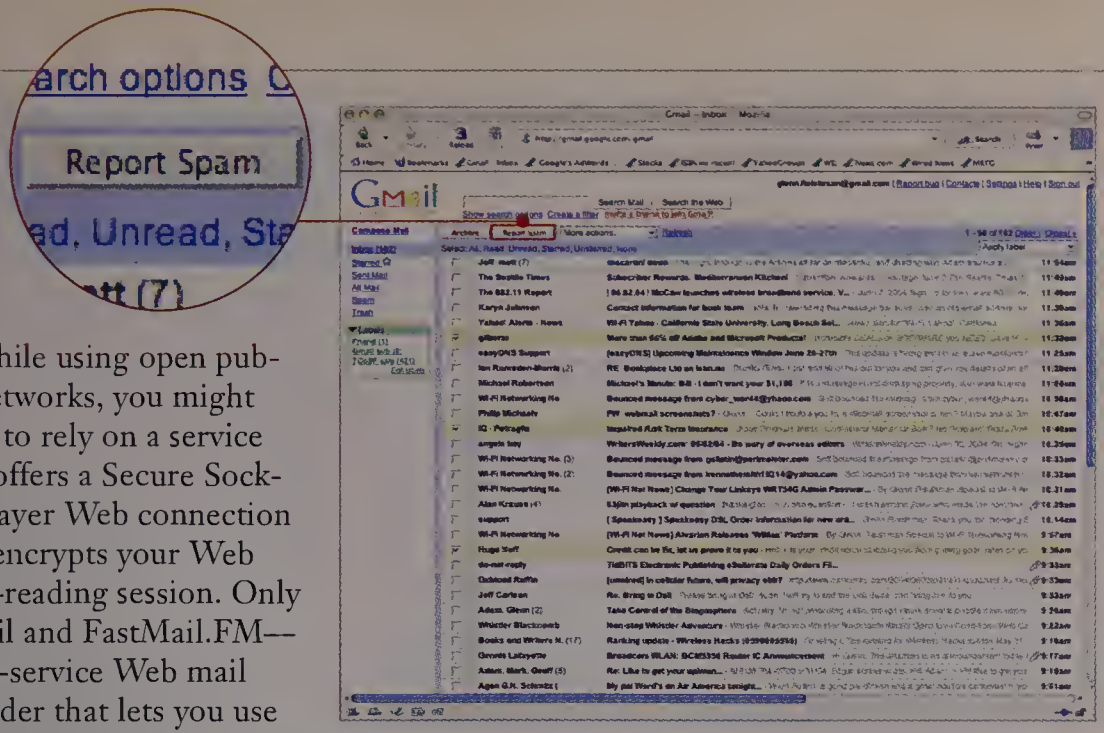
The long-established free Web mail providers include Yahoo and Hotmail (see "Who's Who in Web Mail"). Hotmail offers the basics, with fees for additional storage beyond 2MB.

As this issue went to press, Yahoo announced plans to extend its free storage, in response to newer services that dramatically extend mailbox size. Gmail, from Google, was still a beta at press time, but will offer 1GB for free. Gmail recently added Safari to its list of supported browsers (see "Gmail Lifts Mac Limit"). Mac-centric site SpyMac.com quickly matched Google's offer, providing an array of hosting services at no cost, including 1GB of e-mail storage.



Pick and Choose FastMail.FM presents an assortment of options to customize sending, filtering, and receiving e-mail.

ILLUSTRATION BY GLENN GUSTAFSON



Spam, Canned You can mark messages and then click on Report Spam to improve Gmail's spam-filtering capability.

While using open public networks, you might want to rely on a service that offers a Secure Sockets Layer Web connection that encrypts your Web mail–reading session. Only Gmail and FastMail.FM—a full-service Web mail provider that lets you use your own domains for an extra fee—explicitly offer this service.

Mailblocks.com stands out among Web mail providers that offer free accounts with its challenge-and-response spam filtering. Each e-mail sender who isn't on your approved list receives an automated challenge message. Once that recipient responds, the message—and all subsequent messages from that sender—moves from a pending folder into your in-box.

Before you set up a Web mail account, you should check with your ISP to see if it offers a Web mail service; many do via their regular Web page–account login. Even America Online offers Web mail as part of its service. If you're running Mac OS X Server 10.3 (Panther), Apple includes Squirrelmail, a Web mail program that works with its e-mail system.—GLENN FLEISHMAN

WHO'S WHO IN WEB MAIL

You can't tell the Web mail providers without a scorecard. Here are six sites that offer free Web-based e-mail accounts, along with Apple's subscription-based .Mac option.

SERVICE	FREE STORAGE	PER-MESSAGE LIMIT	ADDITIONAL STORAGE FEES	SPAM FILTERING	IMAP/POP RETRIEVAL FROM WEB MAIL ACCOUNT	E-MAIL RETRIEVAL INTO WEB MAIL ACCOUNT
FastMail.FM, www.fastmail.fm	10MB	none listed	16MB, one-time $15 fee; 50MB–150MB, $20–$40 annual fee	simple blocking for free and one-time fee accounts, Bayesian filtering for annual-fee accounts	IMAP, POP available for annual-fee users only	POP and Hotmail
Gmail, http://gmail.google.com	1GB	10MB	not available	filtering through group spam reporting	not available	not available
Hotmail, www.hotmail.com	2MB	1MB (larger for paid services)	10MB, $20 annual fee; 100MB, $60 annual fee	simple blocking	POP with paid service	not available
.Mac, www.mac.com	no free option	3MB	15MB, $99 annual fee; 25MB, $109 annual fee; 200MB, $189 annual fee	simple blocking	POP and IMAP	not available
Mailblocks.com, http://about.mailblocks.com	5MB	6MB	15MB, $10 annual fee; 100MB, $25 annual fee	challenge and response	POP and IMAP with paid service	POP with paid service
SpyMac.com, www.spymac.com	1GB	10MB	not available	proprietary blocking and filtering	POP	POP
Yahoo, http://mail.yahoo.com	100MB	10MB	2GB, $20 annual fee	simple blocking, Bayesian filtering with paid service	POP for $20 a year	up to three remote POP accounts

Gmail Lifts Mac Limit

It's easy to understand why Gmail has stirred up a lot of buzz, even though the Google-backed Web mail service was still a beta at press time. With a full gigabyte of storage space, Gmail users can turn their Gmail accounts into remote file servers. Javascript functions, such as keyboard shortcuts and the ability to expand and collapse messages without an HTTP fetch, make Gmail feel more like a desktop application than a Web-based one. Since Gmail sorts messages by labels rather than by folders, users can file the same e-mail in multiple categories. Conversation threading and a powerful search tool—both of which are similar to features in Apple's Mail app—make finding old messages a snap.

But one thing had dimmed Mac users' excitement over Gmail: until a few weeks ago, you needed to use a browser from Netscape or Mozilla if you wanted to give Google's Web mail service a whirl.

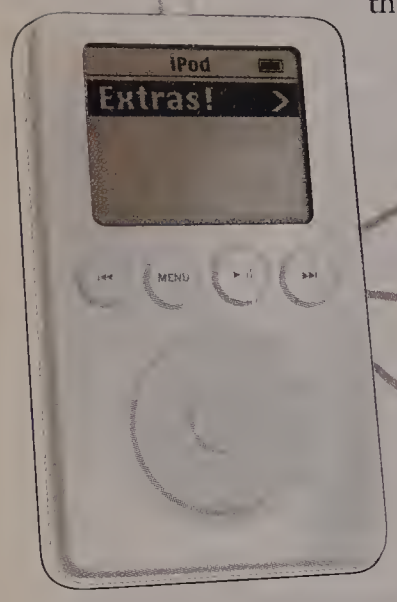
Google has pledged to add support for other browsers—just as it did in June with Apple's Safari. "We're going to make it work with Safari, and that's one of the high-priority things. I want to fix that, and I want to make it work really well," Google cofounder Sergey Brin told *Macworld* shortly before Safari was added to the list of supported Web browsers.

Microsoft's Internet Explorer—still unsupported at press time—does work with Gmail's beta, albeit with limited functionality. If you ignore the unsupported-browser warning, you can log in and perform most of the functions with Internet Explorer that you can with supported browsers. Rumors put full compatibility somewhere on the near horizon. (Since Google is in an SEC-mandated quiet period related to its initial public offering, it cannot comment on when full support will be added.) Furthermore, Google told *Macworld* that it plans to release an HTML-only version of Gmail that works with all browsers.—MATHEW HONAN

MUSIC PLAYER KEEPS ADDING PDA FUNCTIONS

iPod—or PDA?

Apple's iPod built its following as a music player. And while Apple routinely scoffs at most iPod-PDA comparisons, a closer look at that device in your pocket reveals that the iPod already does a very passable PDA imitation.



TRADITIONAL PDA FUNCTIONS Out of the box, the iPod can store and sync contact information, calendars, and notes; it even has alarm-clock and modest game-playing capabilities. And with third-party software such as iPod It (♦♦♦♦; *Mac Gems*, June 2004), you can transfer and view e-mail, news, and weather data.

AUDIO RECORDING Apple added voice-recording support to the iPod last October. Since then, Griffin Technology's iTalk (www.griffintechnology.com) has joined Belkin's Universal Microphone Adapter and Voice Recorder accessories (www.belkin.com) in letting you record audio directly to your iPod.

DATA STORAGE Since the iPod's debut, Apple has touted the device's ability to act as an external FireWire drive. Belkin's Media Reader and Digital Camera Link now let you use the iPod to store digital photos without having to connect to a computer first.

And the future is even more promising: the iPod's PortalPlayer chip (www.portalplayer.com) has more functionality than Apple is letting on, including the ability to decode numerous graphics formats and output digital audio and video. But even without such features, the "music player" is quietly becoming a capable PDA.—DAN FRAKES

HARDWARE BEAT

E232 and **E232t**, from Lexmark (www.lexmark.com): Monochrome desktop laser printers print 22 pages per minute (E232, $199; E232t, $299).

E330, **E332n**, and **E332tn**, from Lexmark (www.lexmark.com): Laser printers print 27 pages per minute (E330, $399; E332n, $499; E332tn, $599).

Perfection 2480 Photo, **Perfection 2580 Photo**, and **Perfection 4180 Photo**, from Epson (www.epson.com): Flatbed color scanners feature resolutions of 2,400 dpi for the 2480 and 2580, and 4,800 dpi for the 4180 (2480, $99; 2580, $149; 4180, $249).

VX510 and **VX715**, from ViewSonic (www.viewsonic.com): The 15-inch LCD monitor (VX510) features 1,024-by-768-pixel resolution ($425). The 17-inch LCD monitor (VX715) features 1,280-by-1,024-pixel resolution ($525).—COMPILED BY PHILIP MICHAELS

BEAT ICONS BY PAUL HOWALT; iPOD ILLUSTRATION BY DAVID McCORD

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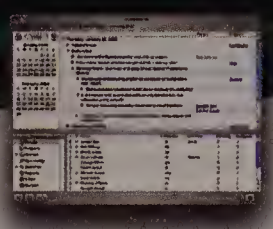

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STORAGE BEAT

d2 DVD±RW Double Layer Drive, from LaCie (www.lacie.com): External double-layer drive can burn DVD±R media at up to 8× speed ($239).

DuoGB800, from WiebeTech (www.wiebetech.com): External hard-disk enclosure with FireWire 800 and USB 2.0 interfaces comes in capacities ranging from 240GB to 500GB ($330 to $620, depending on capacity).

Impression 2.5, from Babel (www.babelcompany.com): Updated OS X backup software for burning directories to optical disks and copying disk images to mounted hard drives features a speed boost and an interactive Backup Options sheet ($25; upgrade, free).

VolumeWorks 1.0, from SubRosaSoft (www.subrosasoft.com): OS X utility lets users resize and manage hard-disk–drive data partitions nondestructively on ATA, SCSI, FireWire, and USB drives ($50).—COMPILED BY PHILIP MICHAELS

ILLUSTRATION BY PAUL HOWALT

SOFTWARE HACKS EXPAND MUSIC PLAYER'S POWER

iPod Geek Chic

With its sealed case and spartan interface, the iPod wouldn't seem to be an inviting target for software hacks. Yet that's exactly what the portable music player has become: geeks the world over are putting a personal stamp on their iPods while improving their devices' functionality. Here's a sampling of some of the more interesting hacks floating around on the Internet, rated on a scale of 1 to 10 for how they'll improve both your iPod and your geek street cred.—CYRUS FARIVAR

TOGGLE iPOD BATTERY STATUS	DOT-POD	LINUX ON iPOD
A nifty little AppleScript from Kevin Nagel changes the iPod's battery-readout icon to a numerical gauge from 0 (empty) to 500 (full), ending the guessing game of squinting at the battery-meter icon to determine if you're going to lose power midplaylist. Running the script again switches it back. **(find.macworld.com/0029)**	If getting your iPod's music onto the Internet has you stumped, just hook up your iPod to any Mac with an Internet connection and launch Jeff Ayling's Dot-Pod application on your computer. The $22 app generates a Web page where listeners can access your iPod's music by typing in a supplied IP address. **(www.dotpod.net)**	What does this hack do? Well, not a whole lot. In fact, it does exactly the same things that the iPod does right out of the box, only it uses Linux. You won't notice a bit of difference in how your iPod operates, but just imagine how cool you'll look, grooving at your next open-source–software conference. **(http://ipodlinux.sourceforge.net)**
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FUNCTIONALITY: 8	**FUNCTIONALITY: 7**	**FUNCTIONALITY: 1**
GEEK POWER: 4	**GEEK POWER: 3**	**GEEK POWER: 11**

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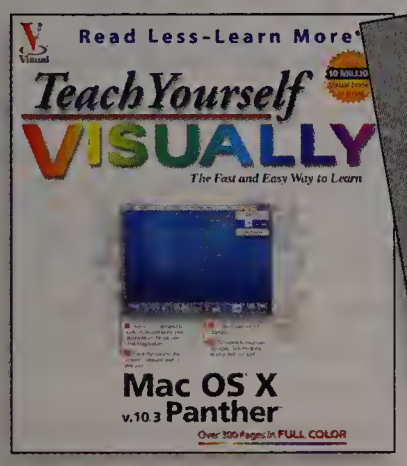

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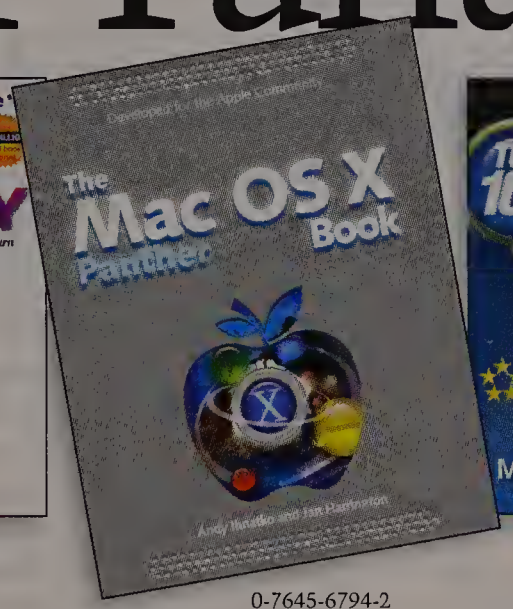

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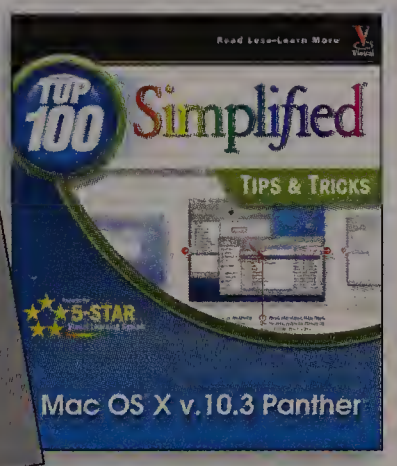

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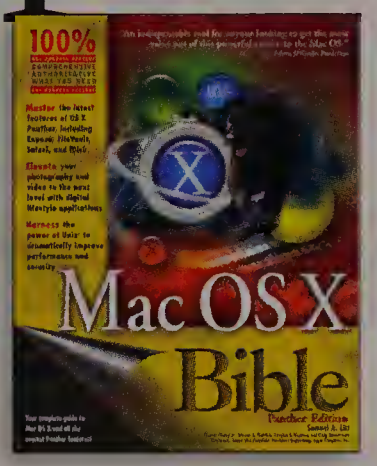

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APPLE UPDATES POWER MACS BUT MISSES 3GHZ MARK

3 Isn't G5's Charm

Steve Jobs made big news at Apple's 2003 Worldwide Developers Conference when he unveiled the dual-2GHz Power Mac G5. But the Apple CEO grabbed even more headlines at the same event with another product announcement—that Apple would release a *3GHz* desktop machine within the next 12 months.

It's a year later, and there aren't any 3GHz Power Macs headed to your local Apple Store. And don't expect any to arrive anytime soon. "It turned out to be a much bigger challenge than anyone expected," says Tim Boger, Apple's director of Power Mac product marketing.

But working with new processor technology that will boost the Power Mac's clock speed to 3GHz isn't the only thing Apple is struggling with. Adding a G5 to the PowerBook and iMac lines is also proving problematic.

"It's important to realize that the technical challenges are not trivial, putting that G5 in a PowerBook," Boger says. "It's the same story [with the iMac]. The challenges are obvious when you look at the G5 and the size of the heat sinks and the enclosure."

Power Mac Moves

But even with the delay in producing a 3GHz machine, Apple hasn't entirely stalled its Power Mac efforts. The company has bumped up processor speeds, with the fastest Power Mac now running at 2.5GHz. Apple also introduced a new cooling system to its top-of-the-line model while adding dual processors across the Power Mac line.

The new liquid-cooling system—aimed at reducing temperature without increasing fan noise—appears in the dual-2.5GHz Power Mac G5. "It's a closed-loop system," Boger says. "Basically, liquid runs by each processor, pulling heat away from the processor, and it's returned back to a grille that fans are blowing air over, returning the liquid to its original temperature." The dual-2.5GHz model, priced at $2,999, is set to ship in July (see "Power Macs March On").

The other two Power Mac configurations—a $2,499 dual-2GHz model and a $1,999 dual-1.8GHz version—are already shipping. All three Power Mac configurations come with an 8× DVD-RW/CD-RW SuperDrive.

Apple also marked the end of the line for the Power Mac G4, announcing that the 1.25GHz system is no longer in production. Power Mac G4s will remain available for purchase while supplies last.—JIM DALRYMPLE AND PETER COHEN

POWER MACS MARCH ON

Here's how the Power Mac line stands after Apple's latest round of updates.

MODEL	FRONTSIDE BUS	INSTALLED RAM/ MAXIMUM RAM	HARD DRIVE	GRAPHICS CARD/ VIDEO MEMORY	PRICE
Dual-1.8GHz Power Mac G5	900MHz per processor	256MB/4GB	80GB	Nvidia GeForce FX 5200 Ultra/64MB	$1,999
Dual-2GHz Power Mac G5	1GHz per processor	512MB/8GB	160GB	Nvidia GeForce FX 5200 Ultra/64MB	$2,499
Dual-2.5GHz Power Mac G5	1.25GHz per processor	512MB/8GB	160GB	ATI Radeon 9600 XT/128MB	$2,999

MINIATURE BASE STATION SUPPORTS AUDIO STREAMING

AirPort Expresses Itself

Measuring 4 by 3 by 1 inches and weighing less than 7 ounces, the new AirPort Express bears a striking resemblance to a power brick. But instead of charging your PowerBook, this latest piece of Apple hardware is designed to fire up your wireless lifestyle. And it's more than just another base station—the AirPort Express also doubles as a wireless music player.

Like the AirPort Extreme, the $129 AirPort Express supports the 802.11g wireless networking standard, as well as WPA network security, and it offers a USB port for printer sharing. The AirPort Express sports one Ethernet port and supports up to 10 wireless users at once—a step down from the UFO-shaped AirPort Extreme Base Station that supports up to 50 users and features separate LAN and WAN ports. But its small size makes the AirPort Express extremely portable—and extremely appealing to mobile Mac users who want to take wireless networking on the road.

Like the AirPort Extreme, the AirPort Express can extend your wireless network, relaying data from existing AirPort Extreme or Express Base Stations and expanding your network into hard-to-reach areas.

Most impressively, the AirPort Express is also musically inclined—it features an audio-out jack that can connect to powered speakers or a stereo with a minijack or optical-audio input. You use iTunes to play back music, and instead of hearing the music on your own speakers, iTunes encrypts and compresses it and then sends it to the AirPort Express, no matter where it is in your house.—MACWORLD STAFF

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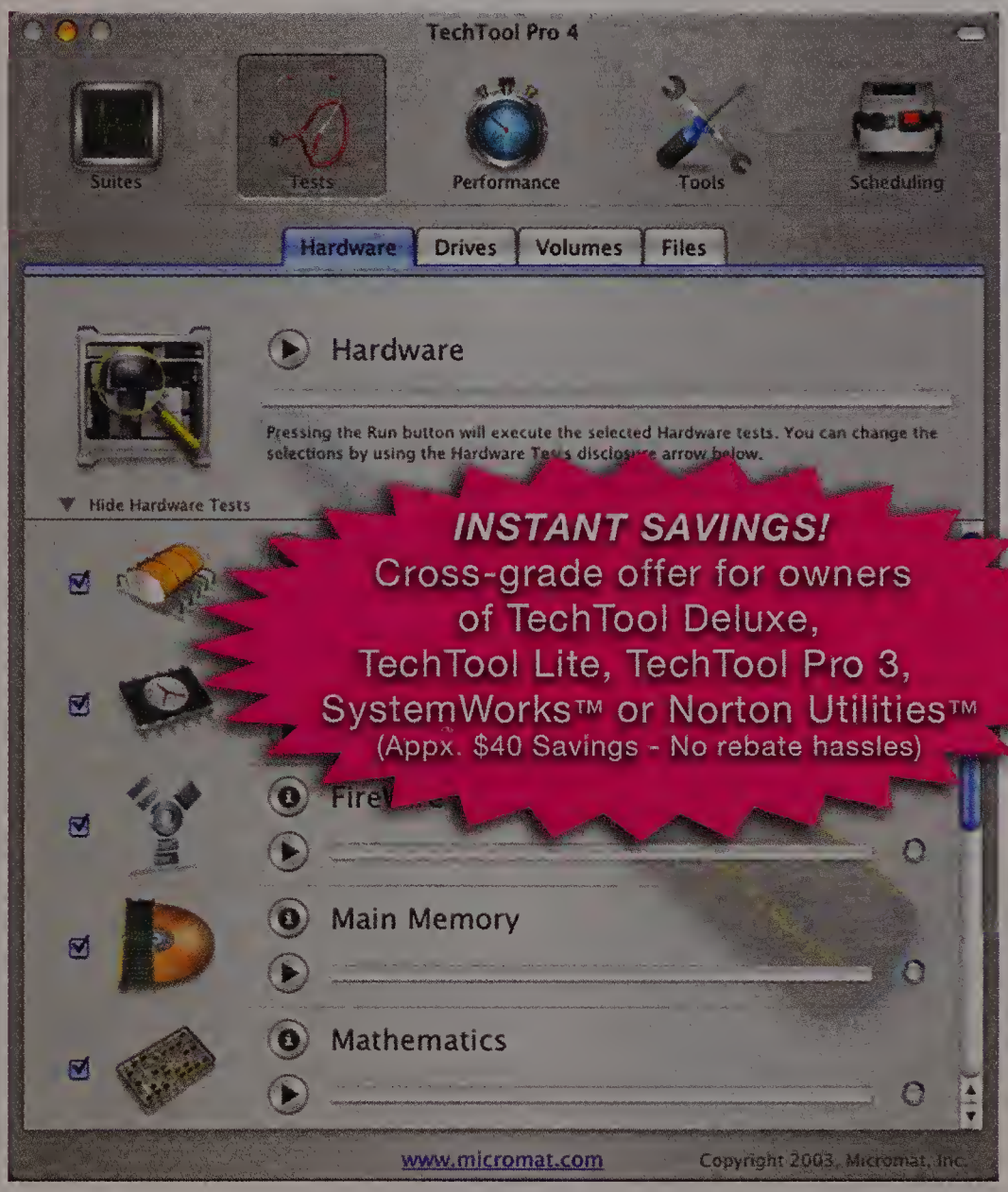

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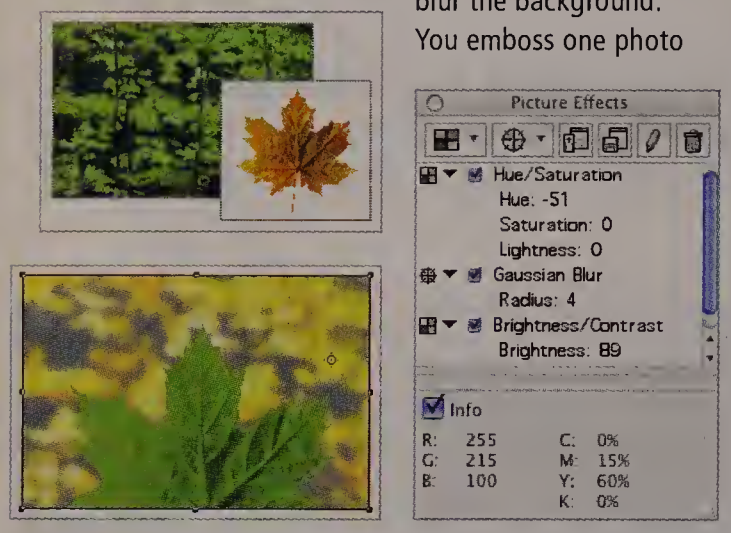
QUARKVISTA XTENSION ADDS IMAGE-EDITING FEATURES

Fixing Quark's Image

Here's a pop quiz for all the print designers out there: a client hands you a CD full of problem images. For some of those images, you tweak the color balance and apply sharpening; for others, you adjust the contrast and blur the background. You emboss one photo and diffuse another. Now, what application are you in?



Effecting Quark QuarkVista adds image-editing features—such as Gaussian Blur—to QuarkXPress.

As of this summer, the answer could be QuarkXPress 6. Quark (www.quark.com) is rolling out QuarkVista, a free XTension that brings image-editing capabilities to its page-layout program. QuarkVista includes dozens of adjustments, filters, and transformations. And all are nondestructive—that is, they don't change the source image, so you can alter or remove any effect at any time.

Quark doesn't see its new XTension as a Photoshop slayer. "We're not competing with [Adobe] Photoshop," says Dan Logan, QuarkVista product manager. "It's a good application."

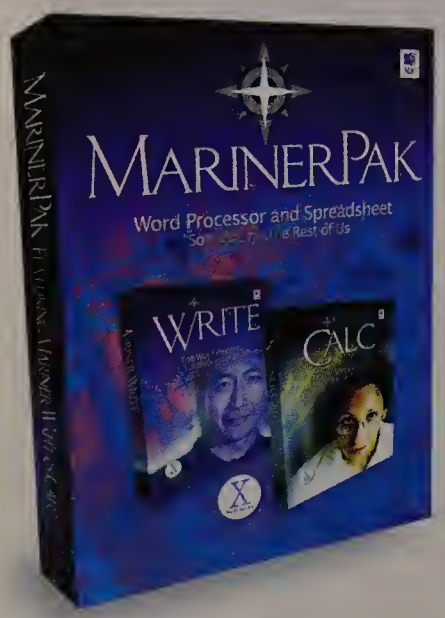
Instead, Logan says, Quark wanted QuarkVista to tackle tasks that don't require a full-blown image-editing app. "A stand-alone editor is best when you need to run an effect on a selection or a certain channel. QuarkVista doesn't do that," Logan adds.—TERRI STONE

NEW APPROACH TO UPGRADE PRICING

Offer of a Lifetime

Anyone who's ever bought software knows the drill: you pay for a product up front and whenever there's a major upgrade, you reach into your wallet again. But a growing number of developers are challenging this conventional approach to selling software by offering free lifetime upgrades.

Mariner Software (www.marinersoftware.com) is the latest company to go the free-upgrade route. Registered Mariner Write (♦♦♦½; March 2004) and Mariner Calc (♦♦♦; March 2004) users who've bought the $70 applications can pay $50 per copy for each app in exchange for free upgrades—no matter how major—for the rest of the program's life. Mariner Software president Michael Wray expects only 20 percent of his customers to take advantage of the offer. But that's enough to meet a company goal: building customer loyalty. "We hope they'll remember us when we introduce new products," Wray says.



Upgraded Ever After Mariner Software offers lifetime updates for a one-time fee.

While it may seem difficult even for small software companies to survive by charging a one-time-only fee, longtime advocates of lifetime upgrades contend that's not the case. "We don't spend heavily on marketing and management," says Andrew Stone of Stone Design, which has offered free upgrades of its productivity and design tools since August 2002. "If we get 1 percent of the Mac community to buy our product, we will make $300 million."

Software users may not have to constantly shell out cash for updates. But if software makers get users' money up front, will they have an incentive to offer regular, substantial upgrades? "[Customers] can alert us to a bug or a problem, and we can have the fixes out within a month in most cases. And it's free," Stone says. "We want people to buy once and feel part of our community forever. That's the incentive we have to keep offering upgrades regularly."—ADELIA CELLINI

CREATIVE BEAT

Animation Master 2004, from Hash (www.hash.com): Updated animation package features interface, modeling, decaling, rendering, and choreography improvements ($299; upgrade, $99).

Intaglio 2.0, from Purgatory Design (www.purgatorydesign.com): Updated drawing and illustration program now converts PDF images to native Intaglio graphics for editing and associates graphics with word processor–like styles for document-wide changes ($89).

Overset Manager 3.0, from SoftCare (www.softcare.de): Adobe InDesign CS and InCopy CS plug-in lets users control text length and overset ($99).

SOHO Business Cards, from Chronos (www.chronosnet.com): Business-card design program contains more than 13,000 graphics and 3,000 designs for more than 400 professions ($29).

TruEdit 3.0, from MEI (www.maned.com): New version of workflow-management plug-in adds compatibility with Adobe InDesign CS and InCopy CS, as well as easy switching between workflow folders ($249).—COMPILED BY PHILIP MICHAELS

GAME BEAT

CSI: Crime Scene Investigation, from Aspyr Media (www.aspyr.com): TV show–based game for OS X 10.2 and later puts players in the shoes of crime-scene investigators ($30).

Harry Potter Deluxe Edition, from Aspyr Media (www.aspyr.com): Bundle combines previously released OS X games, Harry Potter and the Sorcerer's Stone and Harry Potter and the Chamber of Secrets ($40).

Kid Create, from Astoundit Software (www.astoundit.com): Suite of kid-friendly software has a slide-puzzle game, a calculator, a dictionary, a clock, and a calendar ($24).

Virtual Grand Prix 2, from Virtual Programming (www.vpltd.com): Racing game features a network-play mode for OS X 10.2 and later ($20).—COMPILED BY PHILIP MICHAELS

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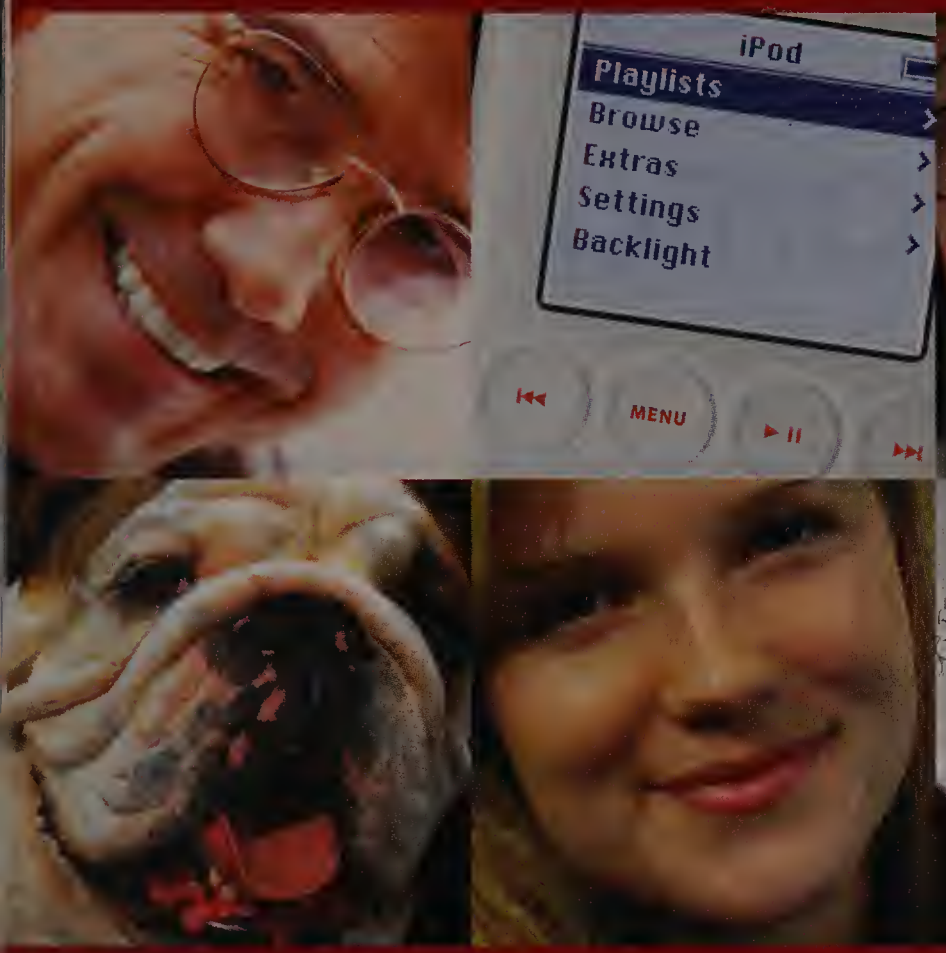

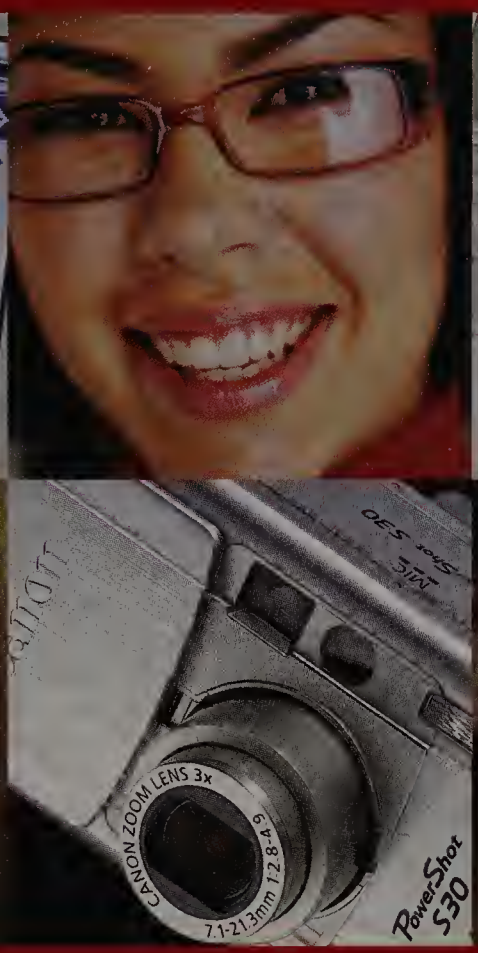

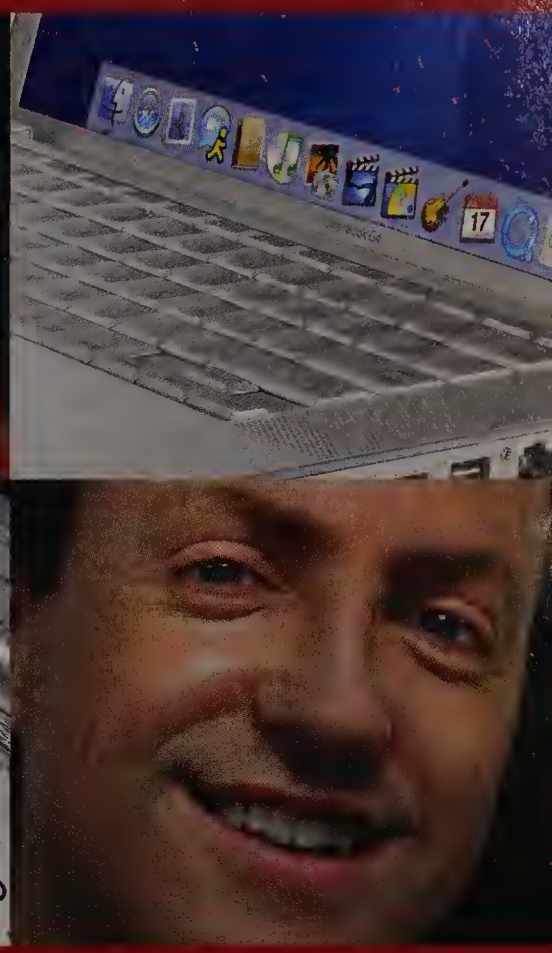

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Microsoft Office 2004

Word 2004

Upgrade Streamlines Program but Can Confuse Users

BY NAN BARBER

Microsoft Word has always represented a struggle between two aspects at odds: a clean, simple interface and a teeming mass of undiscovered features—some of them treasures, and others that are just plain clunky. This year's incarnation, Microsoft Word 2004, brings some new, interesting ways to work, such as the Notebook Layout view with audio notes. And Microsoft has tackled the discoverability factor by adding new buttons and Formatting Palette panels. At the same time, other features, such as Track Changes, have become clunkier.

In Your Notes

If you still use a spiral notebook for taking notes, this version of Word may herald your time to digitize. The Notebook Layout view resembles a notebook, with its lined-paper look and divider tabs (see "Taking Note"). The Note Levels feature lets you drag and drop notes hierarchically. There are also disclosure triangles for expanding and collapsing subordinate points, and clear markers for moving or selecting individual note points—all of which make for a much more attractive, and OS X–like, way of navigating an outline than Word's Outline view.

RATING: 3½

PROS: Excellent Notebook Layout view; incredibly useful Audio Notes feature; redesigned toolbars; Smart Buttons make Word's power more accessible.

CONS: Some features missing in certain views; differences between views can be confusing; unintuitive Track Changes and Comments.

PRICE: $229; upgrade from earlier versions, $109; as part of Microsoft Office 2004, $399; upgrade from earlier Office versions, $239

OS COMPATIBILITY: Mac OS X

COMPANY: Microsoft, 800/426-9400, www.microsoft.com

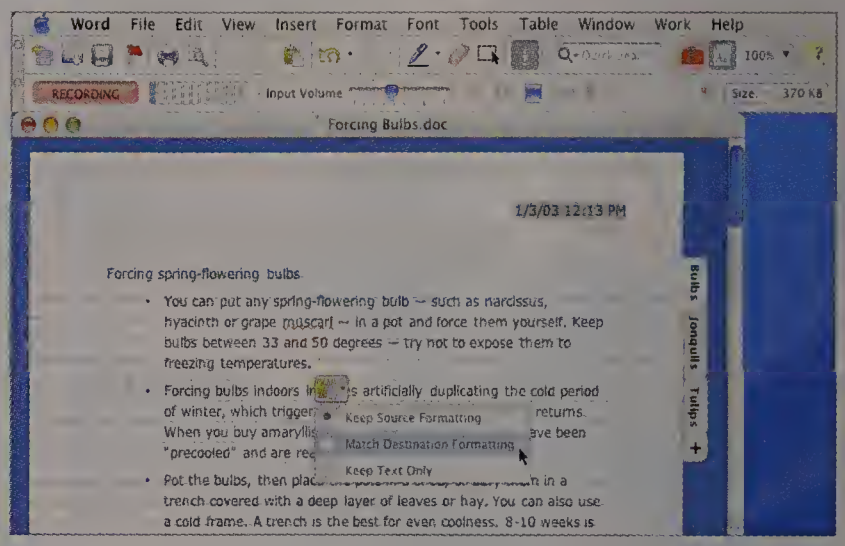
In addition to letting you type text into your document, Word 2004 supports Apple's Ink technology in Panther and Jaguar, so you can write on a graphics tablet and watch your letters turn into text.

There are even more ways to get notes into Word 2004. Using the Audio Notes feature in the Notebook Layout view, you just click on the Record button to start recording. (You need a microphone, but they're not hard to find—and most Apple laptops have a built-in mike.) If you're recording and taking minimal notes concurrently, Word will associate sections of the recording with each new bullet point. Click on the speaker icon next to a note to play back the audio that supplements that note.

Only two toolbars appear in Notebook Layout view: a standard Notebook Layout toolbar and an Audio Notes toolbar. Features such as Word Count and the ability to select heading styles aren't available in this view, and Word Count even disappears from the pared-down Tools menu. The interface may be clean, but these omissions reduce this view's usefulness, because you have to spend extra time switching into a different view to use familiar tools.

You can convert any existing Word document into Notebook Layout view when you open it, but you will lose formatting, including most text styles, paragraph indents, and bulleted lists.

Despite its few quirks, the Notebook Layout view gives you a streamlined note-taking tool that's perfect for students, businesspeople, and news reporters. And when it becomes too limiting, you can move to fuller-featured, dedicated notebook programs such as Circus Ponies' Note Book and AquaMinds' NoteTaker (4½; "More Mac Software Bargains," May 2003).



Taking Note The Smart Paste button, shown here in Word's new Notebook Layout view, saves you trips to the toolbar.

Navigating with Ease

Clicking on the new Navigation Pane icon in the Standard toolbar opens a pane of thumbnails, much like those in OS X's Preview app. This pane can help you move around in long documents containing many illustrations or other objects (it's less useful in a text-heavy document, where all the thumbnails will look the same). The Navigation Pane also includes a document map consisting of key text in your document, which provides an easy shortcut for finding your way through a long document.

Buttons with Smarts

Word's new Smart Buttons are time-savers that reduce the amount of trips you have to make to the menu bar or to Word's preferences. When you paste text, a clipboard icon appears next to it (see "Taking Note"). Click on this icon and choose from a contextual menu how you want to format the pasted text. The contextual menu goes away as soon as you start typing or resume working in the document, so it won't get in your way. (You will also find Smart Buttons in Excel 2004.)

As you type a word that Word is autocorrecting, a blue underline with a small triangle appears briefly under that word. If you click on it, you'll see a menu where you can return to what you were originally typing, tell Word to stop autocorrecting, or open the AutoCorrect dialog box. This is a nice solution to the frustration Word sometimes causes by, say, immediately autoformatting your bulleted list.

28 Microsoft Office 2004
Entourage 2004
Excel 2004
PowerPoint 2004
Word 2004

36 Midlevel scanners
Canon CanoScan 9900F
Epson Perfection 4870 Photo
Hewlett-Packard Scanjet 8200
Microtek ScanMaker i900
Umax PowerLook 1000

38 Network-management package
IPNetMonitorX 1.4

41 Landscape-generation application
ArtMatic Voyager 1.1.2

42 PowerBook SuperDrive
OWC Mercury Ti SuperDrive 4×

42 Portable floppy drive
LaCie USB Pocket Floppy 4×

43 PDA software
PocketMac Pro 3.3

44 CSS editors
CSSEdit 1.6.3
Style Master 3.5

45 Lexicon software
Word Menu 2.2

46 Scriptwriting package
Final Draft 7

47 Color-proofing utility
ProofMaster Adesso

49 The Game Room
Command & Conquer Generals, Didi & Ditto Kindergarten, Pharaoh's Gold, Riddle of the Sphinx II, Shrek 2: The Game

55 Mac Gems
HistoryHound, iPaste, KeyCue, Plain Clip, Preferential Treatment, TheHotFolder

Formatting Palette Gets a Lift

The Formatting Palette is often the centerpoint of using Word X, and it's even more feature-rich in Word 2004. The new Add Objects pane lets you add photos, movies, and other items previously found only in the Insert menu. Tabs at the top offer one-click access to AutoText entries—such as the date—as well as symbols, clip art, WordArt text, shapes, and new fill-in-yourself objects such as preformatted calendars and checklists.

The Formatting Palette also has a new Styles pane, which brings some features buried in the Style dialog box out into the open, such as the ability to create a new style. The drawback is that using this pane to select a style may take longer than using the simple Style pop-up menu that used to appear in the Font section of the palette.

Changes to Tracking

If you're a Track Changes user, you've surely clicked on the little green TRK button in the Status bar to turn Track Changes on and off, to wrist-cramping effect. You'll be glad to see the big Track Changes button on the remodeled Reviewing toolbar.

And instead of choosing three menu options in the Accept Or Reject Changes dialog box to see your document in its unaltered condition or its final state, you can now swiftly choose from a new Markup menu on the Reviewing toolbar.

The Show menu, next to the Markup menu, also makes it easy to view edits and comments from a specific reviewer. It also gives you more choices for what types of changes you'd like to see or hide.

In previous versions of Word, deleted words appeared by default as strikethrough text (crossed out with a single line). Now the default setting is that the old word merely changes color, and the new word is italicized. You can still tell what's going on, but it can be very confusing. (Fortunately, you can change the Track Changes options to bring back the strikethrough style.)

Most of the time, you'll review tracked edits in the main body of the document. However, if you're hooked on the Comments feature, some of the changes to it may offer a less-than-happy surprise. Now called the Reviewing Pane, the Comments pane used to offer a neat list of comments, delineated by each reviewer's initials. Now, comments and text edits are mushed together in a confusing list, with different sections for comments located in the main document, footnotes, and so on. And the inability to click on a comment in Normal view and have Word jump to that comment in the Reviewing Pane is maddening. This new list is convenient if you're a grad student and your documents contain tons of footnotes, but it's superfluous and distracting for almost everyone else.

A clearer way to view comments is to switch to Page Layout view, where comments appear in balloons (color-coded by reviewer) along the right side of the page, with lines connecting them to the corresponding word or phrase.

Macworld's Buying Advice

This new version of Word has some big new features that will motivate many Office users to upgrade. The Notebook Layout view will be enough for many people who don't need a more involved program designed specifically for this task. However, if you're a heavy user of the Track Changes and Comments features in Word X, the changes in Word 2004 might not impress you. And because Word 2004 keeps the old features in place (Outline View and the Clipboard) while adding the new ones (Notebook Layout view and the Scrapbook), you may not need to invest in the latest version. □

Excel 2004

Venerable Spreadsheet Program Evolves Nicely

BY ROB GRIFFITHS

For those whose data analysis needs are anything but simple, Microsoft Excel is a mainstay. Though AppleWorks and ComGrafix's RagTime both have spreadsheet modules, Excel has the rich feature set and Windows compatibility that number-crunchers have come to rely on.

If you're familiar with prior versions of Excel, you'll feel right at home in Excel 2004; Microsoft has kept the best of prior releases while adding productivity-enhancing new features, including a Page Layout view, Smart Buttons that help with common tasks such as formula debugging, and nice-looking chart-formatting options.

RATING: ♦♦♦♦

PROS: Useful new Page Layout view; expanded Formatting Palette; much improved formula-input method.

CONS: No support for Mac OS X Services; occasional display glitches.

PRICE: $299; upgrade from earlier versions, $109; as part of Microsoft Office 2004, $399 (upgrade and other pricing available)

OS COMPATIBILITY: Mac OS X

COMPANY: Microsoft, 800/426-9400, www.microsoft.com

What's New?

Substantial improvements lie hidden beneath Excel's familiar surface. Like its siblings in Office 2004, Excel 2004 has a Toolbox icon that gives you access to the Office-wide Project Center, checks compatibility with other versions of Office, and opens the Scrapbook to store often-used text and graphics (see "Office's Common Ground").

The first thing you'll notice in Excel is the default Page Layout view—it looks nothing like the views in prior versions of Excel. The active page is white, while the others are grayed out until clicked on. If you're an advanced Excel user, you may find this view takes some getting used to—your 36-column-wide report, for instance, will now have visible page-break gaps. Luckily, the old Normal view is available in the View menu. If you can get accustomed to it, though, the Page Layout view shows you exactly how your spreadsheet will print out.

The Formatting Palette is much improved in Excel 2004. You may actually first notice it when you're not using it—it fades to semitransparent when it's inactive, and becomes opaque again when you mouse over it. Although transparency helps reduce the palette's visual intrusiveness, you can't select cells behind it. But through the Customize Formatting Palette option, you can instead have the palette minimize when it's not in use, which gets it completely out of the way.

Like Word and PowerPoint 2004, Excel 2004 puts Add Objects in the Formatting

continues

Palette, making it easy to insert charts, symbols, shapes, lines, and text shapes. Choose one of the objects, and Excel places it on the worksheet. Finally, the Page Setup section of the palette includes a new Orientation area with buttons that you can use to easily toggle between Portrait and Landscape mode. The Print Scaling options in this section give you full control over your spreadsheet's print layout. These changes reduce the time that you used to spend activating menus, viewing print previews, and memorizing shortcut keys for various symbols.

The downside to this revised palette is its size. With a graphic selected, for instance, the fully expanded Formatting Palette is taller than the 1,280-pixel height of my 23-inch Apple Cinema Display. When I'm working on a PowerBook, I have to click a lot on the Formatting Palette's disclosure triangles to reveal and hide the various sections within the available screen space.

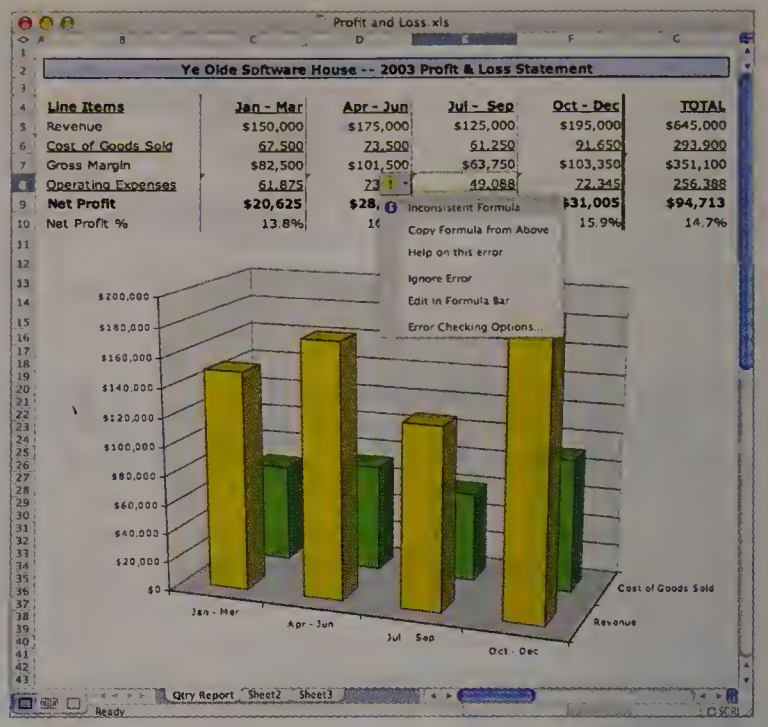
Charts Turn Professional

If you use only the Formatting Palette's Add Objects section to insert charts in Excel 2004, you'll miss out on some cool new looks for your charts. In the Custom Types area of the Chart dialog box (Insert: Chart), you'll find an assortment of new, very professional-looking templates. So instead of a boring Pie from the Standard Types area, you can go for the 3D Anodized Pie to really bring your data to life.

Get Smart Buttons

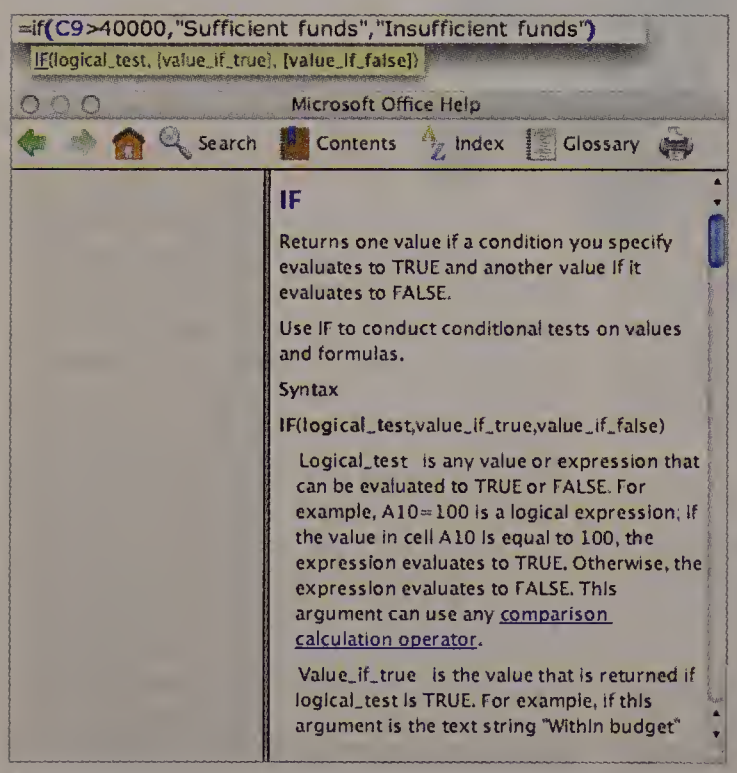
Microsoft calls them Smart Buttons. You'll probably just call them amazing. What are they? They are new buttons—Auto Fill Options, Insert Options, Paste Options, and Error Checking Options—that pop up when Excel senses a need for them. For instance, when a formula contains an error, you'll see the Error Checking Options button.

If you've ever copied and pasted a formula from a cell when you actually meant to paste just the cell's formatting, you'll appreciate the Paste Options button. Instead of having to undo what you did and repaste using the Paste Special: Formats option, you can click on the Paste Options button (which suddenly pops into existence when you paste) and select Formatting Only from the pop-up menu. The contents of your destination cells will instantly revert, but they will retain the formatting from the copied range. You can also use the pop-up menu to choose other options, such as pasting values or applying the source's column width when pasting.



The Formula Detective The Error Checking Options Smart Button helps you find mistakes in formulas. Here it's pointing out that the formula in this cell isn't consistent with those of the neighboring cells.

The Error Checking Options button can help you find subtle errors in spreadsheets—the kind that you may not notice during development, but that your boss will somehow zero in on when it's time to review your work. When Excel detects a potential error in a formula, such as references to blank cells or inconsistency with neighboring formulas, it flags the formula and displays a yellow caution sign whenever the cell is active. Click on the caution sign, and Excel pops up a menu to help you resolve the problem (see "The Formula Detective"). If all is fine with the formula, select Ignore Error from the pop-up menu, and Excel will remove the flag. In practice, Excel flags more cells than necessary, but it's easy enough to clear the false positives.



Memory Aids Function ScreenTips appear whenever you're entering a formula, and help you remember the proper order for a given formula's operators. If that's not enough, full help is just a second away—click on the hyperlinked formula name.

Refresh Your Memory

Excel has hundreds of formulas, many of which have a complex, hard-to-memorize syntax. The new Function ScreenTips feature makes entering even the most obscure formula simple. Start typing a formula and the Function ScreenTip appears below the cell, showing the basic syntax for each portion of the formula. Click on the hyperlinked formula name in the ScreenTip, and you'll see Excel's formula-specific help page (see "Memory Aids"). ScreenTips take up very little screen real estate (Excel X's bulky Formula Palette is still available if you wish to use it), and they usually provide just the amount of detail you need to complete a formula without even opening the help files.

Speed and Performance

Testing a complex spreadsheet on both a 1.25GHz PowerBook G4 with 768MB of RAM and a dual-2GHz Power Mac G5 with 2.5GB of RAM, I found that application launch times, recalculation speed, and scrolling speed were equal to or quicker than those of Excel X on the same machines. And in many hours of testing, I didn't experience a single crash, which speaks well for Excel 2004's stability.

Although I experienced no major problems with the program, I did see an occasional graphical glitch, such as a distorted Smart Button and text that wasn't antialiased after I switched between Excel and other running applications (scrolling the document fixed these problems). The lack of support for Mac OS X's Services menu is disappointing—Carbon applications (BBEdit, for instance) are quite capable of supporting services. So for example, it's harder than it should be to create a note in Stickies from an Excel cell entry (you'd use a simple ⌘-shift-Y to do this if services were available).

Macworld's Buying Advice

Although Excel 2004 lacks a single groundbreaking "gotta have it!" new feature, the benefit of the other enhancements adds up to a winning package—Excel 2004 is a strong successor to Excel X. Microsoft wisely kept the majority of Excel's interface identical to its predecessors', making the learning curve easy for this new edition. And the new features are so useful, you'll soon wonder how you managed without them. If you make your living working with numbers in spreadsheets, you'll find this latest version of Excel a valuable partner. □

PowerPoint 2004

Presentation Application Gets Its Strongest Upgrade in Years

BY FRANKLIN N. TESSLER

RATING: ♦♦♦♦

PROS: Presenter Tools manage on-screen presentations; expanded Formatting Palette simplifies workflow; improved graphics.

CONS: No path-based animation; can't customize keyboard shortcuts; no security features.

PRICE: $229; upgrade from earlier versions, $109; as part of Microsoft Office 2004, $399 (upgrade and other pricing available)

OS COMPATIBILITY: Mac OS X

COMPANY: Microsoft, 800/426-9400, www.microsoft.com

Apart from adopting the Aqua interface and a handful of other new features, PowerPoint X didn't sport many compelling changes when it debuted over two years ago (♦♦♦♦; February 2002). In the meantime, Apple surprised us by releasing Keynote, a program with the power to turn out stunning presentations—but limited animation options and other missing features hampered it (♦♦½; April 2003). PowerPoint 2004, an excellent upgrade that delivers helpful tools for presenters, crisper graphics, and an improved workflow, should more than satisfy current users, and may even entice a few Keynote adopters to switch back.

Presentation Central

Whether you're a PowerPoint newbie or a seasoned pro, you'll love PowerPoint 2004's brilliant Presenter Tools feature. While your audience watches your presentation on a projector or other secondary display, you see three resizable panes on your monitor (see "Full Control"). The pane on the left shows numbered thumbnails of all your slides. A handy clock at the top displays the elapsed time to keep you from going over your allotted time.

Presenter Tools' Audience view shows you exactly what the audience members see. The cursor appears on their display whenever you mouse over the live view on your monitor, so you can get by without a separate laser pointer. The area immediately below contains your notes; you can read them from there, or even edit them during your presentation—a practical way to note that half your audience fell asleep during the 28th slide.

A small, movable window shows you what your audience is about to see, whether it's the result of the next animation on the current frame or an upcoming slide. Keynote offers some of the same functionality when you're presenting in dual-display mode, but its slide thumbnails are too small to read, and you can't edit your notes.

Animation Options

PowerPoint 2004's expanded repertoire of animation effects widens its already considerable lead over Keynote. In addition to entry and exit animations, it offers new emphasis effects that let you change the display properties of text and graphics. For example, you can highlight a line of text by enlarging it temporarily or make a baseball look as if it's flying away by shrinking it.

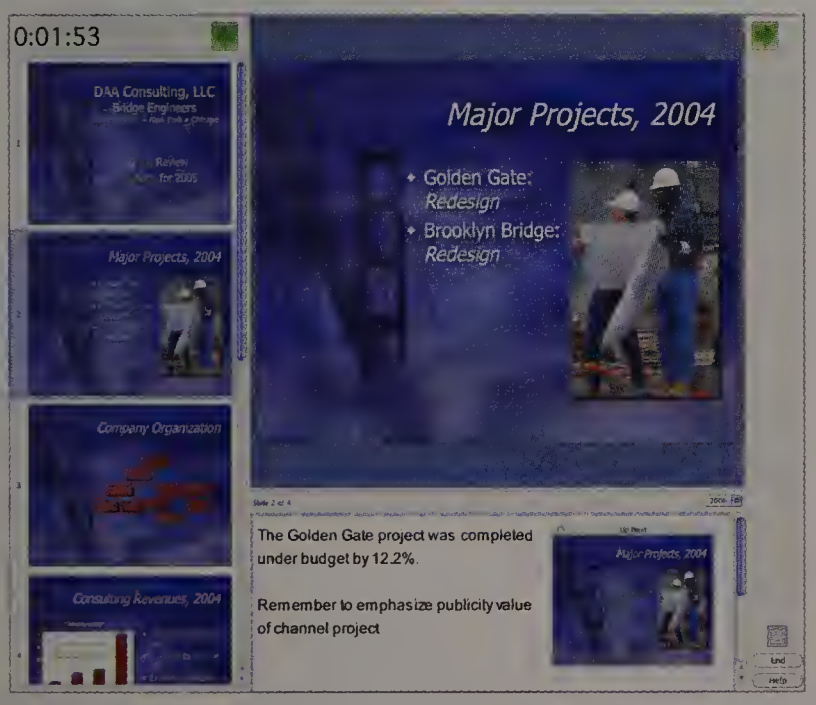
For the first time, PowerPoint for Mac lets you define more than two animations for every object on a slide; coupled with PowerPoint's flexible options for triggering and timing animations, this allows you to add a dazzling array of effects. I also prefer PowerPoint 2004's revamped Custom Animation dialog box, which is easier to navigate than PowerPoint X's tabbed window.

Despite the attention Microsoft paid to animation, PowerPoint 2004 doesn't support path-based animation, a feature that's been a staple of PowerPoint for Windows for years.

Easy on the Eyes

Keynote still beats PowerPoint for rendering dazzling text and graphics, but a few welcome changes to PowerPoint 2004 narrow the gap. My favorite addition is support for soft drop shadows, a substantial improvement over the harsh shadows in PowerPoint X. (However, soft shadows created in the Mac version won't render properly on Windows PCs or in earlier Mac versions of PowerPoint, a limitation that Office 2004 will flag if you use the Compatibility Report feature in the Toolbox palette [see "Office's Common Ground"].)

PowerPoint 2004 benefits from enhanced transparency support—the boundaries between opaque and transparent parts of objects, which sometimes appeared jagged in PowerPoint X, now render smoothly. And Microsoft has finally refreshed PowerPoint's aging collection of templates. Although they're less attractive than Keynote's limited selection of themes, the more than 100 new designs in PowerPoint 2004's library are a vast improvement. PowerPoint 2004 also sports an expanded inventory of slide transitions, which provide special effects that help hold the audience's attention between slides.



Full Control The Presenter Tools feature lets you control your slide show from your Mac.

Smoother Workflow

Over the years, PowerPoint's increasingly cluttered interface has confused new users and spawned a cottage industry of self-help books. Thankfully, the Formatting Palette in PowerPoint simplifies things by gathering common tasks in one handy location. Tabs in the Formatting Palette's Add Objects panel let you add slides, symbols, shapes, lines, or text shapes to your slide with a click or two. The Change Slides panel at the bottom of the Formatting Palette makes it a snap to change the current slide's design, transition, or layout.

Unfortunately, PowerPoint still doesn't let you customize keyboard shortcuts, as Word and Excel do. And PowerPoint 2004's lack of security features is even more surprising—for example, there's no way to distribute a read-only presentation, and you can't open password-protected files that were created in PowerPoint for Windows.

PowerPoint 2004 retains the previous version's approach to master slides. You can use multiple masters in a presentation, but only by inserting slides from another presentation or by applying a different design template to slides in the current one. I prefer Keynote's method, which lets you define as many masters as you like.

Aside from a few display glitches, I didn't encounter any critical bugs while running PowerPoint 2004 under Panther.

Macworld's Buying Advice

It's a safe bet that PowerPoint 2004 wouldn't be nearly as good as it is if Apple hadn't released Keynote when it did. PowerPoint still lags behind in producing tantalizing eye candy, but not by much—for some speakers, PowerPoint 2004's Presenter Tools and its more comprehensive animation options will more than compensate for the difference. If you're already a PowerPoint user, I highly recommend the 2004 upgrade. □

Entourage 2004

E-mail Enhancements and Project Organization Tool Make for a Worthy Upgrade

BY TOM NEGRINO

If dealing with a flood of e-mail messages and the many details of your life seem to be getting harder every day, you may be craving a powerful tool to help you keep your head above water. Entourage 2004 tries to fulfill that role by becoming the center of all your informational needs, from e-mail, to your contacts and calendar, to tracking your projects. With its improved message views, better junk-mail filtering, and practical project-management tools, it mostly succeeds.

RATING: ♦♦♦♦

PROS: Improved junk-mail filtering; useful project tracking.

CONS: Minor e-mail bugs; somewhat inflexible archiving.

PRICE: as part of Microsoft Office 2004, $399 (not available separately; upgrade and other pricing available)

OS COMPATIBILITY: Mac OS X

COMPANY: Microsoft, 800/426-9400, www.microsoft.com

Project Center

The marquee addition to Entourage is Project Center, which allows you to create and organize projects that can include information from inside and outside Entourage. In Project Center, there are seven tabs along the top of the main window that cover the project's calendar and tasks; associated e-mail messages; files (of any type—you're not limited to Office files); contacts from Entourage's Address Book; clippings from the Office Scrapbook; Entourage Notes; and an Overview tab that shows you the current week, upcoming tasks, and recent project messages and files (see "View from a Height"). Project Center allows you to jump to any information associated with a project in a single click, whether it resides in Entourage, elsewhere on your hard drive, or on networked file servers.

The New Project Wizard steps you through creating a project, first letting you set the project name, due date (a countdown then appears in the Overview tab), and color (which makes it easier to identify project items). The wizard next creates (or you can select from existing folders) Project Watch Folders, which are Finder folders that Entourage monitors, automatically adding their files to the project. Similarly, any e-mail messages from contacts you've added to the project are automatically flagged as part of the project (or you can turn off the automation and flag items manually). You can also choose to share your project with colleagues by placing the project information on a file server or on iDisk. Entourage updates and synchronizes all participants' files every 5 minutes.

Setting up projects is easy, and Entourage makes it simple to associate files and information with projects, either automatically or by using the new Projects pop-up menu in the toolbar. But you'll only get the full use of projects if you use Entourage for all of your PIM needs; there's no integration with other PIM software such as Apple's Address Book or iCal. Even with that limitation, the new Project Center is very useful. In fact, you may find that the ability to open any document quickly from the Overview tab, instead of searching for it in the Finder, will be the part of Project Center you use the most.

E-mail Tune-up

Reading e-mail is easier in Entourage 2004, thanks to the new three-column view, which gives the message list its own column and puts the preview pane on the right side of the window. This often lets you see an entire message at once without needing to scroll through it.

When you're working in other applications and mail arrives, Entourage pops up a small window that shows you the mail's subject and sender and then smoothly fades away after a few seconds. If you click on the subject while the window is present, Entourage becomes active and opens the message.

You can now use Word to write your message, taking advantage of its superior formatting abilities. In Word, choosing File: Send To: Mail Recipient (As HTML) converts the Word document to HTML and creates a new message in Entourage that you can address and send. If you're not an HTML e-mail fan, however, you won't like the mail Word creates—its extra HTML and CSS tags bloat the code.

continues on page 35

Office's Common Ground

You may appreciate the little touches in Office 2004, such as the translucent Formatting Palette and the ability to use more than 31 characters when naming a file. But that's not all: there are a few bigger features in every Office application that you won't want to ignore. They're all accessible through a palette in Word, Excel, and PowerPoint (click on the red Toolbox button).

The Projects Palette

Starting in Entourage, you use the New Project Wizard to set up project basics such as deadline, name, and description (see our review of Entourage, this page). But you can also use that data in Word, Excel, and PowerPoint. Just click on the Projects tab in the Toolbox palette. Here you can see and change schedules, create tasks, open associated project e-mail messages, add the current file, assign contacts, and keep ongoing notes about the project (see "Keep It Together"). A tabbed window keeps the interface clean and uncluttered. The abil-ity to add any file to the project is a real time-saver.

Compatibility Report

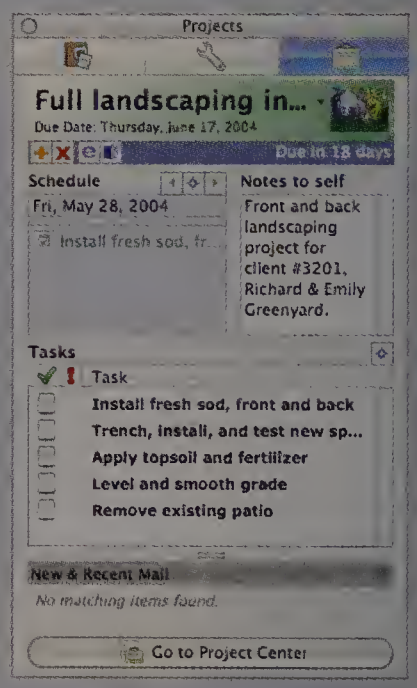
Also in the Toolbox palette is the Compatibility Report panel. It ensures that others who have different versions of Office will be able to use your files. A pop-up menu lets you specify which version(s) of Office to test against; then your file is checked for feature compatibility with those version(s).When it's done, the Compatibility Report not only tells you what's not compatible, but also offers a one-button Fix command.

Scrapbook

If you have text and graphics that you use over and over (your company's logo and tag line, for example), the new Scrapbook feature in the Toolbox will save you tons of time. (In Entourage 2004, it's under the Tools menu.) To use it, copy something to the Clipboard, open the Scrapbook, and then click on Add. You can then assign keywords to the object and assign it to a project. You can even search for previously filed items. Once in the Scrapbook, the object is available for easy pasting across the Office suite.

A Sweet Suite

The new suitewide features of Office 2004 help tie its programs together into a true suite. You may just find that these features offer you a productivity boost as well.—ROB GRIFFITHS



Keep It Together The Projects Palette makes all of your project's information available from any Microsoft Office 2004 application.

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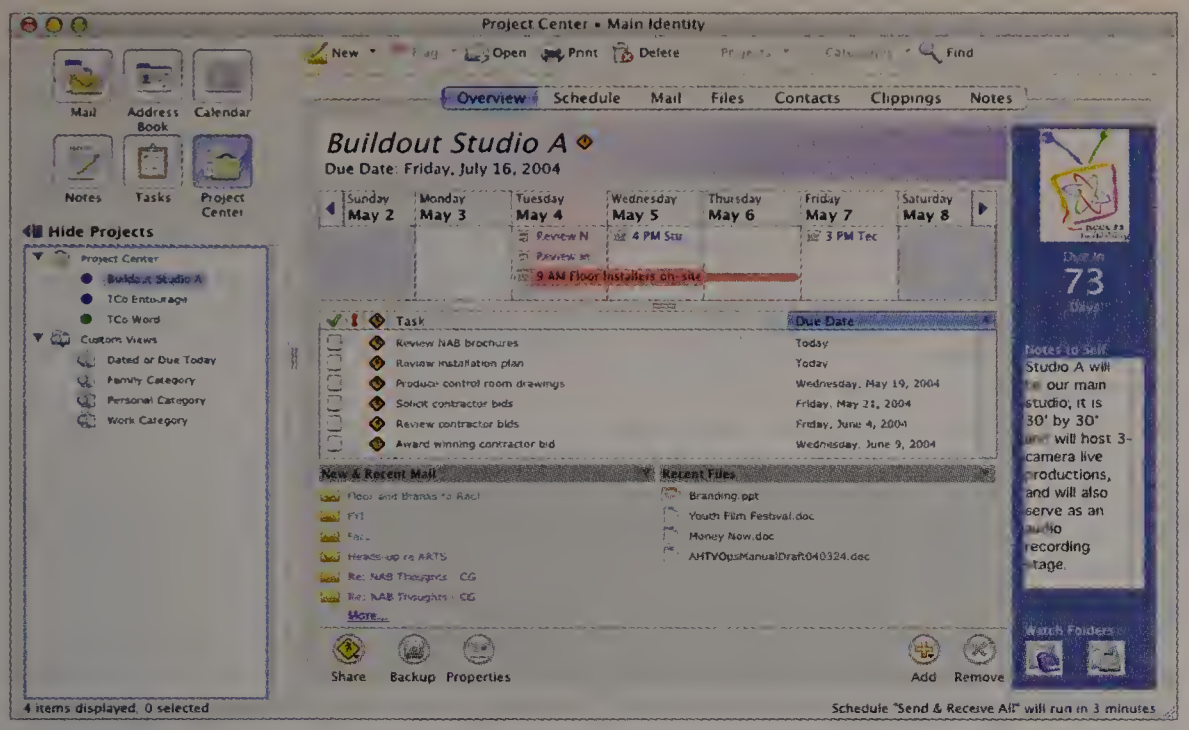

View from a Height In Project Center's Overview area, you can easily see how many days you have before your deadline, upcoming events and tasks, and the latest project messages and files, which you can open with just a click.

continued from page 32

Entourage 2004 e-mail is not without its share of minor bugs, one of which remains unfixed from Entourage X (a Mailing List Manager option to not receive copies of messages you've sent to a list still doesn't work). Another problem is that the mail list in some folders always appears scrolled to the bottom; it doesn't remember where you last left it.

Protection from Online Evil

Modern e-mail programs need robust abilities to identify and block junk e-mail, and Entourage 2004's Junk E-mail Protection feature is greatly improved over the previous version's. The Folder List has a new Junk E-mail folder, to which it routes suspected junk. As before, you can set increasingly restrictive levels of protection. The algorithms that identify junk mail are far better than those of Entourage X, whose junk-mail blocking was so weak that I needed to use a third-party spam-filtering program, which I no longer required after upgrading to Entourage 2004. Microsoft can upgrade the junk-mail filtering separately from the rest of Entourage using Office 2004's new AutoUpdate feature, so as spammers become more diabolical, Entourage should be able to keep up.

A favorite trick of spammers (and some legitimate businesses) is the Web bug, hidden within images in e-mail messages and Web pages. Simply displaying the image triggers the bug. Then the culprits can use the information it sends them to find out if and when you read a particular e-mail message; they can even discover your IP address. To protect you, Entourage 2004 no longer downloads pictures in e-mail messages immediately; instead, you click on a link in the message to display pictures if you think they're innocuous. For senders you know are safe, you can set a preference in your Address Book to always allow pictures from them.

Archive Outdated Information

When a project is over, you probably don't need to keep the folders, messages, and other items in Entourage, yet you may not want to simply delete these items in case you need them later. Entourage now allows you to export messages, tasks, contacts, notes, calendar events, and project files to a single file in a new format called an Entourage Archive. You have the option to remove the archived items from Entourage, or you can leave them there, which allows for ongoing project backups. Annoyingly, you can't archive a group of selected items (such as messages returned by a search); you're restricted to exporting items that either are part of a specific project or share a particular category.

Data Crunching and Repair

Entourage keeps its information in a database, and longtime users know that an Entourage database needs maintenance. Occasionally it becomes corrupt, requiring repair, but it's more likely to need compacting, because the database grows as you add messages, but doesn't automatically shrink when you delete information. Microsoft now supplies Database Utility, a separate application for rebuilding and compacting Entourage data. It's also easier to use than the similar facility in previous versions, and it clearly identifies database backups with the date and time.

Macworld's Buying Advice

The introduction of project organization is a natural evolution for Entourage, consolidating its data to put all the pieces of your projects within easy reach. The e-mail improvements, especially the spam filtering, make it easier than ever to handle your e-mail load. Despite a few minor bugs, Entourage 2004 will help you work more efficiently and be better organized. □

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Midrange Flatbed Scanners

Advanced Models Generate Good, Not Spectacular, Images

BY JACKIE DOVE AND JAMES GALBRAITH

If you're willing to fork over more than $200 for a scanner—for breathing new life into tired, old photos or for scanning slides or negatives—you're likely looking for the exceptional image quality, speed, and flexibility associated with a midrange flatbed scanner.

We tested the Canon CanoScan 9900F, the Epson Perfection 4870 Photo, the Hewlett-Packard Scanjet 8200, the Microtek ScanMaker i900, and the Umax PowerLook 1000 on a 1GHz Power Mac G4 with 512MB of RAM, using OS X 10.3. All but the Umax are in the midlevel price range of $400 to $600; the Umax PowerLook 1000 base model (with an optional transparency-adapter lid) costs $598 and includes SilverFast SE. The unit we tested for this review included the transparency lid and the more expensive SilverFast Ai software package—the only software at press time that supported high-bit scanning on the PowerLook 1000 in OS X 10.3. The Umax with this configuration costs $899.

Each scanner has different features, including sophisticated software with advanced controls, high optical resolutions, fast connections, and the ability to scan negatives and transparencies. And two of them include the Kodak Austin Development Center's Digital ICE technology, which lets you restore damaged photos and fix fading, dust, scratches, and tears.

While no single scanner left the others in the dust, we chose the Canon as the front-runner because it has the best image quality across both reflective and transparency categories. The Epson was a close second, but its transparencies came out too dark. The term *reflective media* refers to photographic and other paper-based scanning sources, and the term *transparencies* refers to negatives and slides.

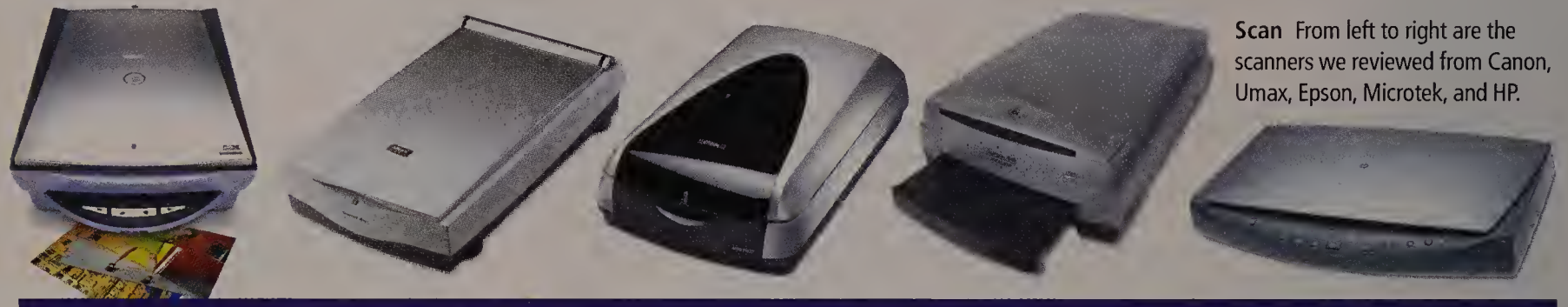
Setup

All of these scanners connect to your computer via USB or FireWire, except for the HP, which has only a USB 2.0 connection. Each scanner in this roundup sports a variation of the new, stylish silver-and-black casing. The Umax is the only scanner that comes with a second lid, for scanning negatives and slides. We found that switching lids—and keeping track of them—was a pain. The Umax, HP, and Microtek scanners have legal-size (8.5-by-14-inch) scanning surfaces, which can be quite convenient. The rest have letter-size (8.5-by-11-inch) scanning beds. Every scanner in this roundup lets you scan multiple slides and transparencies simultaneously, and all except the Umax have an adapter built into the scanner lid.

Stacking Up the Specs

High resolution and bit-depth specifications are important considerations for people who want to enlarge a small image while maintaining the original's clarity and preserving enough data to edit in an image editor such as Adobe Photoshop. Hardware resolution, measured in pixels per inch (ppi), correlates with the level of sharpness and detail (data) that the scanner hardware can deliver without using software interpolation—a software boost that can give scanned images too soft a focus. The hardware (optical) resolutions of these scanners varied: the Epson and the HP have 4,800 ppi; the Canon and the Microtek have 3,200 ppi; and the Umax trails at 2,400 ppi.

Bit depth refers to the number of colors (and shades of gray) that scanner hardware



Scan From left to right are the scanners we reviewed from Canon, Umax, Epson, Microtek, and HP.

MIDRANGE FLATBED SCANNERS COMPARED

COMPANY	PRODUCT	MOUSE RATING	PRICE	OS COMPATIBILITY	CONTACT	OPTICAL RESOLUTION (PPI)	CONNECTION INTERFACE	PROS	CONS
Canon	CanoScan 9900F	★	$400	9 X	800/652-2666, www.canon.com	3,200	USB 2.0/FireWire	Best overall image quality; good color matching; good detail capture; least expensive.	Blocky shadow detail in reflective images; software won't save settings.
Epson	Perfection 4870 Photo		$449	X	800/463-7766, www.epson.com	4,800	USB 2.0/FireWire	Good quality detail in reflective and transparent images; quick scan times for reflective images; includes Digital ICE; good shadow detail; good color matching in photos.	Transparencies were too dark.
Hewlett-Packard	Scanjet 8200		$499	9 X	800/752-0900, www.hp.com	4,800	USB 2.0	Quick scan times; legal-size scanning surface; good-quality line-art reproduction.	No FireWire connection; blocky shadow detail in reflective scans; flawed color matching; handles only 35mm slides and negatives; frustrating software package.
Microtek	ScanMaker i900		$599	9 X	310/687-5940, www.microtek.com	3,200	USB 2.0/FireWire	Includes Digital ICE; legal-size scanning surface; comes with SilverFast Ai.	Blocky shadow detail in reflective scans.
Umax	PowerLook 1000		$899 (with SilverFast Ai)	9 X	214/342-9799, www.umax.com	2,400	USB 1.1/FireWire	Legal-size scanning surface; good shadow detail; good line-art reproduction; includes SilverFast Ai; supports a wide range of transparency sizes.	Expensive; slow; requires an additional lid to scan negatives and transparencies.

★ = Editors' Choice.

	TIMED RESULTS		JURIED RESULTS			
	4-BY-6-INCH PHOTO AT 1,200 DPI	35MM SLIDE AT 2,400 DPI	REFLECTIVE DETAIL QUALITY	REFLECTIVE COLOR QUALITY	TRANSPARENCY DETAIL QUALITY	TRANSPARENCY COLOR QUALITY
Canon CanoScan 9900F	2:30	3:03	Good	Good	**Good**	**Very Good**
Epson Perfection 4870 Photo	1:58	1:17	**Very Good**	**Very Good**	Flawed	Flawed
Hewlett-Packard Scanjet 8200	1:39	1:12	**Very Good**	Flawed	Flawed	**Very Good**
Microtek ScanMaker i900	2:47	2:12	Good	Good	**Good**	Good
Umax PowerLook 1000	3:17	3:49	Good	Good	Flawed	Good
	<Better	<Better				

BEST RESULTS IN **BOLD**.

TIMED RESULTS: All scores are in minutes:seconds. All scanners were connected to a dual-1GHz Power Mac G4 system with Mac OS X 10.3.3 and 512MB of RAM installed. Using Adobe Photoshop CS, we recorded the time it took each scanner to scan a 4-by-6-inch photo at 1,200 dpi at maximum bit depth. We then timed the scanning of a 35mm slide at 2,400 dpi at maximum bit depth. The Umax has a maximum bit depth of 42; the rest have a maximum bit depth of 48. JURIED RESULTS: A panel of experts looked at a variety of images from each scanner printed to an Epson Stylus Photo 2200. The jurors rated each scanner as Excellent, Very Good, Good, Flawed, or Unacceptable based on the detail and color quality of the output.—MACWORLD LAB TESTING BY JAMES GALBRAITH AND JEFFY K. MILSTEAD

can produce. Of these five scanners, all but the Umax have 48-bit color; the Umax has 42-bit color. But all of these scanners can theoretically deliver billions of colors—many more than the human eye can decipher. Our panel of experts judged how well these scanners reproduced images and transparencies.

Photos and Line Art

We rated all the scanners as Good or Very Good for reflective image quality, but none received an Excellent rating. We tested the Microtek using the pro-level SilverFast Ai software, because it produced better image quality and color.

Our test photo contains a variety of items designed to show how well scanners match colors and capture detail in both the highlights and the shadows. It pictures fruits and vegetables, as well as a variety of surfaces such as wood, metal, and skin.

The Epson and the HP rose to the top for their ability to capture detail. We were able to make out clearly defined peppercorns in a dish, the texture of salsa in a bowl, and even handwriting on a menu card and lettering on a measuring spoon. The other scanners produced respectable results, with somewhat less overall detail. The Umax joined the Epson in having good detail in the shadows, while the others had blocky, indistinct shadows.

The HP and the Umax did the best job of reproducing black-and-white line art, a scan of shapes and fine lines. Both had better contrast than the others, which resulted in cleaner, more-distinct lines.

The Epson came the closest of all the scanners to matching the colors in the test image. The HP scored the lowest in color matching in that the images came out too red.

Negatives and Transparencies

Unlike dedicated slide scanners, the units we tested use the same hardware to reproduce reflective and transparent images. This is asking a lot, as these image types are vastly different. The results indicate that these scanners tend to specialize in reflective images, even though they are capable of somewhat imperfect transparency reproduction.

We used a 35mm slide of the same test photo we used in the reflective tests to find out how well the scanners reproduced detail and matched colors in transparencies. Overall, the Canon ranked the highest: it excelled in color matching and was among the best in capturing detail. The Epson's transparency scan came out too dark; the Umax's colors were light and undersaturated, and the image was too softly focused.

Most of the transparency adapters could accommodate 35mm slides and film, as well as medium and large format (4-by-5-inch) transparencies. The Microtek threw a few more transparency holders into the box, while the HP was able to handle only 35mm slides and negatives.

Performance

How fast were these scanners? The HP was the winner in all timed performance tests, with the Epson coming in second. The Umax was the slowest in both categories.

The HP completed a test scan in 1 minute and 39 seconds. The Epson completed a scan of the same image in 1 minute and 58 seconds. The rest trailed, taking anywhere from 2 minutes and 30 seconds to more than 3 minutes per scan.

The HP produced the swiftest scan of a 35mm slide, at 1 minute and 12 seconds, with the Epson in second place at 1 minute and 17 seconds. The rest took between 2 and 4 minutes.

Software Focus

Without good software, your scanner is just a big box of mirrors, glass, and moving parts. All scanners ship with some kind of software interface that lets you scan without an image editor. Each scanner comes with Adobe Photoshop Elements 2 in the box, in addition to its own proprietary software. The Umax, Microtek, and Epson scanners also include a version of LaserSoft's SilverFast—either Ai or, with the Epson and the Umax, the lower-end SE, unless you get Umax's $899 package (see "Midrange Flatbed Scanners Compared").

SilverFast is powerful, full-featured software that is customized for each scanner hardware configuration. For novices, SilverFast's plethora of finely calibrated controls can be overwhelmingly complex. Pros, however, will appreciate how much image-editing time that scanning with the correct specifications saves.

Canon's Scan Gear Tool Box was slightly annoying in that it didn't allow you to save your settings. It will save the previous scan's settings, but it won't save specific settings for specific types of images.

The HP Photo and Imaging software package was the most frustrating. Its barebones interface—a sparse and quirky collection of pull-down menus without many graphical elements—was intrusive because it launched at startup and stayed open in the Dock even when the scanner wasn't hooked up. Furthermore, the Photoshop plug-in didn't install automatically from the included CD, and there was no documentation outlining how to install it manually. The scanner software showed up in the Photoshop Import menu but would not scan. After we installed the software manually, the scanner showed up *twice* in Photoshop. One menu item worked and the other didn't. This is totally unacceptable and may be a good reason not to purchase this scanner.

Macworld's Buying Advice

None of these scanners emerged as a slam-dunk winner. Each had strengths and weaknesses in different areas. The Canon CanoScan 9900F was our scanner of choice because of its all-around good image quality. Its moderate price and hassle-free software are also attractive.

Were it not for the darkness of its transparencies, the Epson Perfection 4870 Photo may have commandeered the top spot for its very good reflective image quality and general speediness. If you're going to concentrate on reflective image scanning, you might consider the Epson. Although the Hewlett-Packard Scanjet 8200 was the fastest scanner and scored fairly well in capturing photographic detail, its software was too frustrating to use for us to recommend it.

IPNetMonitorX 1.4

Network-Management App Adds Power to OS X's Free Tools

BY DOUGLAS HEESTAND

Sustainable Softworks' IPNetMonitorX 1.4 is an all-purpose tool for troubleshooting network connections. Built primarily for network administrators and power users, it provides a wealth of information about how your computer connects to the outside world.

Many of IPNetMonitorX's 17 tools are freely available as part of OS X, and you can access them via Terminal or the Network Utility application. So why would you pay for IPNetMonitorX? Because it does a fine job of unifying these tools within a consistent user interface. It also offers capabilities that the free tools don't. And IPNetMonitorX augments existing OS X tools. OS X's Traceroute tool allows only one type of trace, UDP; IPNetMonitorX adds two more types—ICMP and Record Route, which give you the flexibility necessary to get through firewalls. OS X's version of the Port Scan tool lets you conduct only TCP scans, but IPNetMonitorX lets you conduct TCP and UDP scans.

The Little Things

Getting started with IPNetMonitorX takes about a minute. Once the program is loaded, you launch the tools from a slender floating palette. The developers worked hard to add touches of luxury. For example, after doing a ping test to a remote computer, we launched the Link Rate tool to test the speed of our connection. The program was smart enough to preload the address of the remote computer we had worked with earlier. Even better, the tools share a list of computers that you connect to often.

If you use the Ping and Traceroute tools often, you'll certainly appreciate them. For example, the program autocompletes addresses as you type. From the Traceroute window, you can select any returned address and press ⌘-option-W to launch a Whois lookup. In addition, the Ping tool can play a sound for each successful ping, which can be enormously useful when you're trying to connect a computer to your network but aren't sure which cable to connect in your wiring closet.

Networking Tools Makeover IPNetMonitorX unites 17 network management tools and gives them a consistent look-and-feel.

Diagnostic Abilities

IPNetMonitorX also adds useful tools of its own, including Address Scan, DHCP Lease, and Link Rate. But despite this program's name, very few of its tools will actually help *monitor* your network—they are mostly diagnostic. The Monitor tool provides a graphical view of traffic flows, but it's limited to your local computer.

New to this release is the AirPort Signal Tool, which is supposed to measure the amount of interference (signal-to-noise ratio) in your wireless network. However, it's not as useful as Apple's new AirPort Management Tools 1.0 (in the AirPort 3.4 update), and it's especially weak for newer laptops because it doesn't work correctly with AirPort Extreme cards. The new Apple tool is graphical, gives you a lot more information about your wireless network than the AirPort Signal Tool, and works with AirPort Extreme.

Macworld's Buying Advice

IPNetMonitorX 1.4 brings solid improvements to OS X 10.3's networking tools by enhancing the user experience and adding capabilities. If you spend a lot of time troubleshooting network connections, IPNetMonitorX will be a valuable addition to your bag of tricks. □

RATING: ♦♦♦½

PROS: Consistent user interface; Ping and Traceroute tools are fast and responsive; Ping tool plays a sound; helpful Address Scan, DHCP Lease, and Link Rate functions; remembers the last remote computer you connected to.

CONS: Limited to local monitoring; AirPort monitoring tool is weaker than the tool that Apple provides.

PRICE: $40

OS COMPATIBILITY: Mac OS X

COMPANY: Sustainable Softworks, www.sustworks.com

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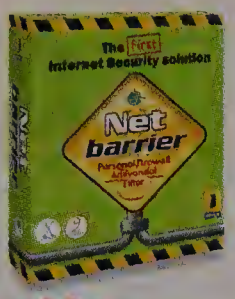

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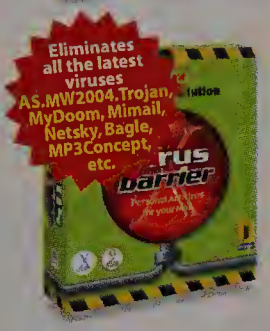

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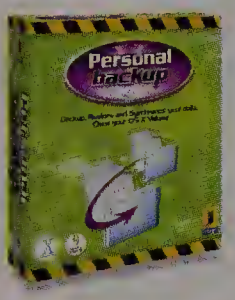

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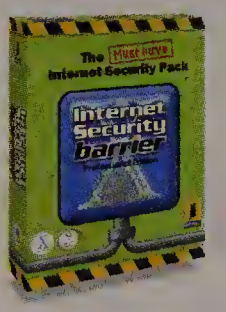

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ArtMatic Voyager 1.1

Bryce-like Landscape Generation Returns to the Mac

BY CHRISTOPHER BREEN

U&I's landscape-generation application, ArtMatic Voyager 1.1.2, nearly caused me to miss my deadline. No, not because the program is difficult to understand or control—a child could create breathtaking photo-realistic vistas with it. Voyager is just so much fun that hours evaporate as you happily tweak the scenery—jumping from one location in a preset world to another, raising the altitude here, and making the water a bit more transparent there.

Creating a Scene Thanks to its intuitive interface, creating stunning landscapes with ArtMatic Voyager takes next to no time.

Genesis

If a program that renders spectacular 3-D landscapes sounds suspiciously like Bryce (Corel's now-discontinued-on-the-Mac application), it should. Bryce's creator, Eric Wenger, is also the brains behind Voyager. In many ways, Voyager is Bryce Lite. It has the same landscape-creation capabilities as Bryce but lacks its tree-creation and geometric modeling tools, advanced painting and lighting controls, and more-complicated interface.

Also, unlike Bryce, all of Voyager's controls are in the program's main window. Using sliders or numeric fields, you can adjust the direction and color of a world's sun (adding a pink hue for sunsets, for example), ambient light, haze, the height of clouds, and the level of the sea and snow. The program conveniently stops rendering previews when you adjust one of the controls.

Voyager ships with four planet surfaces—each of which offers more physical space than the surface of the earth—and you can create additional surface textures with U&I's ArtMatic Pro image-creation application (♦♦♦♦; June 2002). U&I sells an ArtMatic Pro and ArtMatic Voyager bundle for $299.

Exploring these vast planets is a snap. To move to a new location, click on a small map or on the Dice icon to be transported to a random location. Once there, you can change views by rotating the compass points or using your keyboard's arrow keys to move forward, backward, left, or right.

Voyager makes some beautiful landscapes, but they can be a little stark, looking more synthetic than those produced by Terragen, a free but far more complicated application (www.planetside.co.uk/terragen). Although you can produce superb snowy peaks, brilliant blue oceans, and haunting desert scenes, the green gradients you can apply to images don't quite evoke lush prairies or tree-studded hillsides. A vegetation-generation feature would be welcome.

Pounding the Processor

In addition to creating static images, you can select different locations on your map, save each selection as a keyframe, and create a QuickTime movie that animates the journey through each keyframe—giving the impression of moving from one place to another. But note that such functions expose Voyager's biggest weakness.

Rendering images takes all the processing power your Mac can spare. Even a relatively fast Mac can take more than 15 minutes to render a complex still image at the program's default resolution of 2,048 by 1,152 pixels, and several hours to produce a 30-second, 15-fps, 320-by-240 QuickTime movie. For example, the image on this page took just over 18 minutes to render on a 15-inch 1.25GHz PowerBook G4 at Best quality (see "Creating a Scene"). With the Shadows option enabled, it took Voyager more than 2 hours to render the same image.

Macworld's Buying Advice

ArtMatic Voyager 1.1.2 may not fabricate images realistic enough to fool you, but what it does produce is impressive. If you're a graphic designer in need of compelling backdrops or just someone who delights in creating unique desktop pictures, Voyager is worth the trip. □

RATING: ♦♦♦♦
PROS: Intuitive interface; creates movies and stills; glorious results.
CONS: Slow animation and rendering times; no vegetation; scenes are somewhat unrealistic.
PRICE: $129
OS COMPATIBILITY: Mac OS 9, Mac OS X
COMPANY: U&I Software, 650/364-0556, www.uisoftware.com

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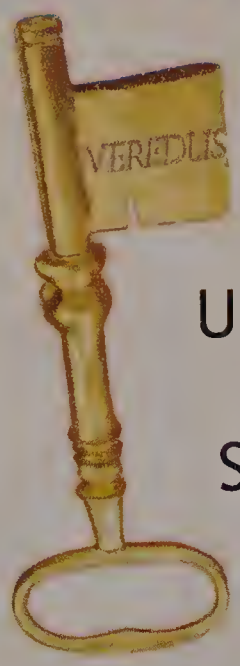

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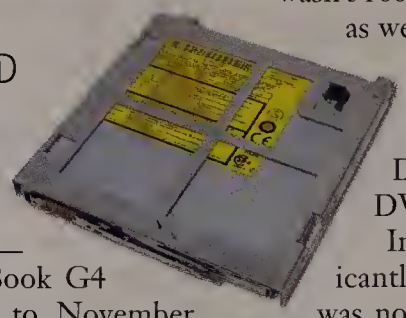

BY OWEN W. LINZMAYER

If you bought a PowerBook G4 that was released prior to November 2002, you probably envy the built-in burning capabilities of the current crop of PowerBooks. With Other World Computing's (OWC's) internal Mercury Ti SuperDrive 4×, you can set aside those thoughts of inadequacy, but you'll need the technical expertise to disassemble your PowerBook (see "The Next Do-It-Yourself Mac," page 58).

The Mercury replaces the CD-ROM/DVD-ROM or CD-RW/DVD-ROM Combo drive of any 15-inch Titanium PowerBook G4 (400MHz to 1GHz), but it doesn't include the necessary Phillips-head and Torx screwdrivers. We installed the drive in 15 minutes without any problems, but if you question your skills, you can opt to pay OWC $60 to perform the installation.

OWC uses the exact same mechanism that's in the currently shipping Macs, but you must run the PatchBurn II software (available on OWC's Web site) once before Apple's i-apps—iDVD, iMovie, iTunes, and so on—recognize the drive as capable of burning. Third-party software support is hit-or-miss. Roxio Toast Titanium 6.0.5 recognized the drive immediately, but Dantz Retrospect 6.0 required us to manually configure a driver. For a brand-new mechanism, this isn't surprising, but it's disappointing that the drive wasn't 100 percent compatible out of the box, as were the older 1× and 2× models we informally tested. The Mercury reads CDs and burns both CD-Rs and CD-RWs at 24×. It reads DVD-ROMs at 12×, and it burns DVD-Rs at 4× and DVD-RWs at 2×.

In our tests, the 4× drive was significantly faster than the 2× drive, which was noticeably faster than the 1× drive. But due to unavoidable overhead, the 4× drive was not precisely four times as fast as the 1× drive. OWC has confirmed that the 4× drive (like many other CD and DVD burners) can be picky about which media it will burn at 4×.

Macworld's Buying Advice

If portability is your biggest concern, you can't beat an internal upgrade such as the OWC Mercury Ti SuperDrive 4×. □

RATING: ♦♦♦
PROS: Compatible with Apple i-apps; internal device offers unmatched convenience and portability.
CONS: Tools not included; tricky installation; third-party compatibility inconsistent.
PRICE: For older PowerBook G4s (with CD-ROM/DVD-ROM drives), between $319 and $349; for newer models (with CD-RW/DVD-ROM Combo drives), between $229 and $279
OS COMPATIBILITY: Mac OS 9, Mac OS X
COMPANY: Other World Computing, 800/275-4576, www.macsales.com

LaCie USB Pocket Floppy 4x

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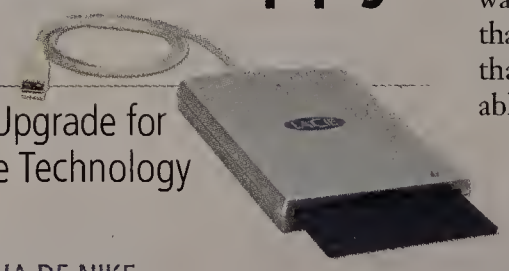


BY KRISTINA DE NIKE

Since Apple killed the floppy, have you found yourself living with zombies? Your PC friends keep sending you floppy disks, and you still have old backups you should transfer to another medium. The LaCie USB Pocket Floppy 4× is a sleek, portable drive that can give your floppies one last gasp.

As LaCie claims, the drive is four times faster than a conventional floppy drive. We copied a 1MB file to it in 15 seconds, or at 8.5 Mbps. On a regular external USB floppy drive, the file took a whole minute to transfer.

But the Pocket Floppy has limitations. It doesn't support auto-eject, so you can't install most applications from a set of multiple floppies. It also doesn't work with the Sleep function. If your system goes to sleep while a floppy is mounted on the desktop and you wake it up, you'll get an error message stating that the disk was not put away properly and that you may have suffered data loss. So disable Sleep when using the Pocket Floppy.

The drive pulls power from the USB port, so you must plug it directly into your computer or a powered hub. It won't work if it's plugged into a USB keyboard.

Macworld's Buying Advice

For about the same price as a conventional floppy drive, the Pocket Floppy gives you better performance. If you still work with floppies and need an external drive, the LaCie USB Pocket Floppy 4× is an attractive choice. □

RATING: ♦♦♦½
PROS: Fast performance for a floppy drive.
CONS: Doesn't work with the Sleep function; can't use for multiple-floppy application installations.
PRICE: $49
OS COMPATIBILITY: Mac OS 9, Mac OS X
COMPANY: LaCie, 503/844-4500, www.lacie.com

PocketMac Pro 3.3

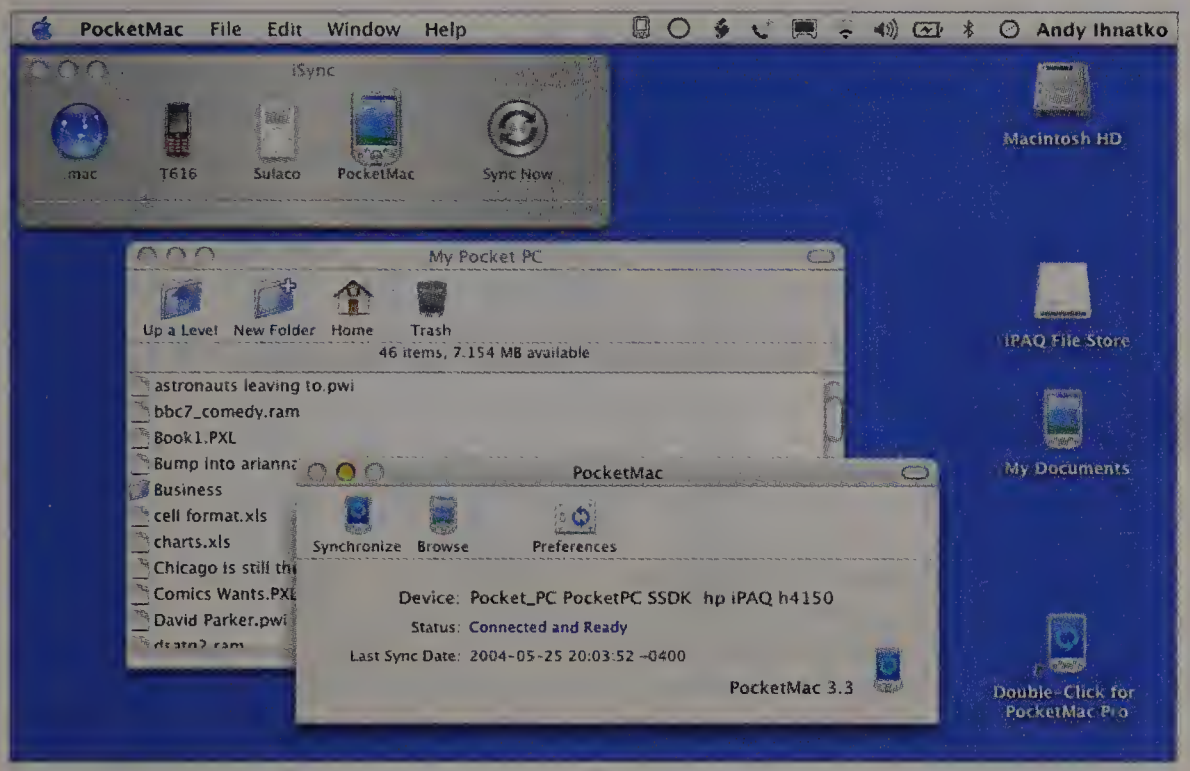
Software Supplies Mac Functionality to Your PDA

BY ANDY IHNATKO

Last year, we reviewed PocketMac Pro 2.0 (3½; June 2003), the first application that allowed PDAs running Microsoft's Windows-only PocketPC OS to interact with Macs. It didn't make a great impression. Installing and configuring the software was a long, fiddly process that was certain to leave you with a clear understanding of what phrases like "kernel panic" and "stress-related embolism" mean. The program also had a clumsy, amateurish interface, and it let you exploit only a fraction of your PocketPC's features.

What a difference a year makes. PocketMac Pro is now a mature, simple, and feature-rich product. Click to install, restart, plug your PocketPC's cradle into the USB port (or activate a Wi-Fi or Bluetooth connection), and you're ready to sync. Version 3.3 provides two-way sync support for Apple's iCal and Address Book, Microsoft Entourage, and Now Software's Now Up to Date & Contact. The installer creates a new iTunes playlist, iPhoto album, and browser bookmarks folder. Music and photos you drop into these areas will automatically go to the right places on your PocketPC when you sync. PocketMac can download the contents of each Web bookmark and move them to your PDA for offline reading. Your unread e-mails (from Apple Mail or Entourage) are slurped into your PocketPC's in-box, and you can designate folders for either one- or two-way file synchronization.

You engage syncing via PocketMac's pull-down menu, through iSync, or by simply dropping your PDA into its cradle. But there's more to using a PDA than just syncing data. You can also browse the contents of your PDA and any of its memory cards and drag files in and out. A utility is included for installing third-party PocketPC software, too. For all that, PocketMac Pro still has stability problems. The software unexpectedly quit three times (with no loss of data) over the course of a week, and it's not hard to overload the Web-content conduit into hanging the app. PocketMac Pro could also stand to have smoother integration with iSync, the Finder, and other Apple apps. PocketMac works well with them, but it's hardly an intimate relationship. For example, it's nice that PocketMac includes a utility that lets you move files between your Mac and your PocketPC, but it would win more style points if it mounted your device in the Finder, like a standard volume.



Smart Sync PocketMac syncs a variety of data, such as songs and Web pages, between your Mac and PocketPC.

Macworld's Buying Advice

PocketMac Pro 3.3 is not the only way to get a PocketPC working with OS X (The Missing Sync, from Mark/Space, is one competitor), but its e-mail and Web features (as well as its support for PIMs other than Address Book and iCal) give it the edge. Overall, PocketMac is a clear winner. □

RATING: 4½

PROS: Easy to install; brings the greatest number of PocketPC features to the Mac.

CONS: Slightly, but not obnoxiously, unstable; needs tighter integration with Apple apps.

PRICE: $42

OS COMPATIBILITY: Mac OS X

COMPANY: Information Appliance Associates, 866/762-5622, www.pocketmac.net

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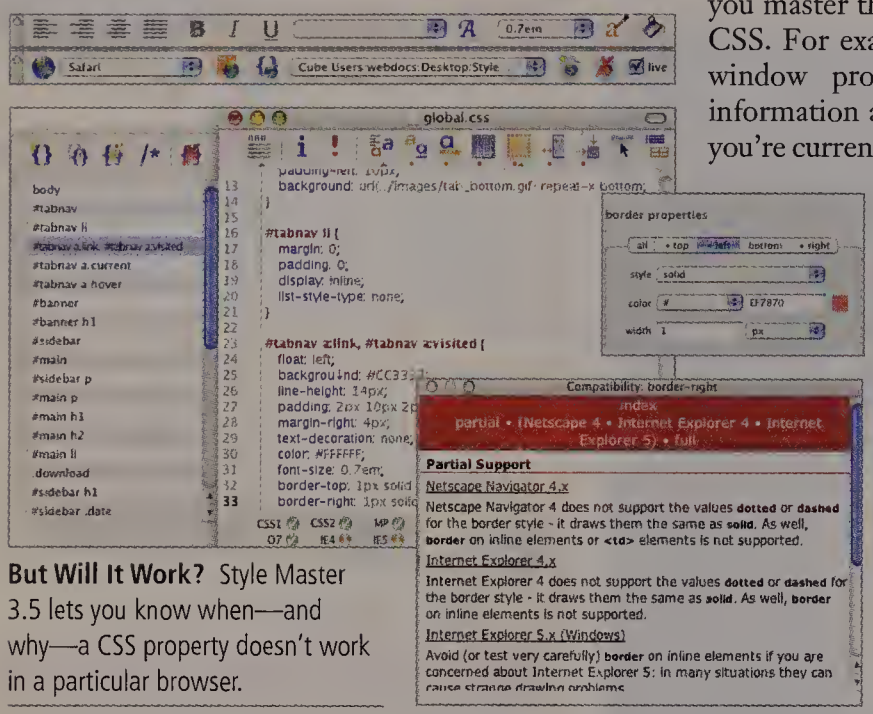
Cascading Style Sheet Editors

Style Master 3.5 and CSSEdit 1.6 Take the Drudgery out of CSS Coding

BY DAVID SAWYER McFARLAND

Thanks to Cascading Style Sheets (CSS)—a formatting language for controlling the display of HTML—the Web is becoming a more beautiful place. CSS can make drab Web pages sparkle with color, imagery, complex layouts, and creative typographic controls. But keeping track of the myriad CSS properties and correct CSS syntax is a challenging task. A dedicated CSS-editing program makes it much simpler.



But Will It Work? Style Master 3.5 lets you know when—and why—a CSS property doesn't work in a particular browser.

Two CSS editors for the Mac, Western Civilisation's Style Master 3.5 and MacRabbit's CSSEdit 1.6.3, do an admirable job of streamlining the process of style-sheet creation. But Style Master provides a complete tool not only for creating styles, but also for learning the complexities of CSS.

Style Master 3.5

Style Master 3.5 provides several approaches to CSS. For novices, a series of wizards takes you through the process of creating style sheets, CSS layouts, navigation bars, and link styles. You can preview your designs directly in the program, using Style Master's built-in Web-page templates or Web-page designs of your own, to get immediate visual feedback on how they look and how well they work.

Advanced designers can use the program's hand-coding window to type CSS code directly, or take advantage of the many CSS property editors that provide a simple interface for setting related CSS properties. For example, the border properties editor provides pull-down menus, form fields, and the OS X Color Picker to quickly assign colorful borders to a style. Fortunately, Style Master doesn't make you choose one approach or the other: both the hand-coding window and the style editors can be open simultaneously, and you can freely jump between the two.

The program also makes it easy to add comments, rearrange styles within a style sheet, and link a style sheet to one Web page or an entire site's worth of files. It even supports media types, so you can apply a "printer-only" style sheet to a page, for example. Unfortunately, you can't link more than one style sheet to a page.

Style Master offers many resources to help you master the tricky ins and outs of CSS. For example, the Feature Info window provides context-sensitive information about the CSS property you're currently editing. And the Support Watcher bar displays simple icons to identify whether a property is supported in a particular browser (see "But Will It Work?"). Clicking on an icon opens the Feature Compatibility window, which gives a detailed description of any browser incompatibility problems. You can customize the list of browsers to check against, but the program unfortunately doesn't distinguish between Internet Explorer 5 for Mac and Windows.

Beginning and experienced designers alike can learn nearly everything they need to know about CSS simply by reading the supplied Web-based reference materials: a manual, a getting-started guide, a thorough tutorial, and others are well written and easy to understand.

CSSEdit 1.6.3

MacRabbit's CSSEdit 1.6.3 is a relatively new program that still feels rough around the edges. Unlike Style Master, CSSEdit assumes you already have a pretty good working knowledge of CSS. There aren't any CSS tutorials or information, and Apple help documents are skimpy.

CSSEdit provides two approaches to coding CSS: by hand or via a series of panes grouped together according to related CSS properties such as text, margin, background, and positioning. As with Style Master, this menu- and button-driven method makes constructing style sheets painless. Unfortunately, you must switch from one view to work in the other, so you can't see both the code and the friendly interface at the same time.

For hand-coders, CSSEdit shines. Its intelligent autocompletion feature matches CSS properties and values to what you're typing. So, for example, if you type `co`, the program writes the CSS property `color` into the style sheet and displays a pop-up list of other matching properties (such as `content`). You can select a property from the list, or just press return if the first listed property matches what you want. The program is smart enough to not list properties you've already applied to the style. Best of all, this feature is very responsive (unlike a similar feature in Style Master), so quick typists can whip out a style with far fewer keystrokes.

CSSEdit includes features for dealing with complex style sheets that include many styles. You can group related styles into "folders" within a style sheet, and quickly search a style sheet for styles that have a particular name or that contain a particular property or value. The unique Extract CSS From URL feature lets you retrieve the styles used on any Web page.

Once you've created a style sheet, CSSEdit lets you link it to an entire site's worth of files. An added option that lets you remove any previously linked style sheets means you can quickly replace one style sheet with another throughout a site.

Macworld's Buying Advice

Both CSSEdit 1.6.3 and Style Master 3.5 do an excellent job of creating style sheets. CSSEdit is inexpensive and great for hand-coders. It also provides a more-than-adequate visual-editing environment. Style Master 3.5, with its wealth of supplemental reference material, browser compatibility information, simple wizards, and CSS file-linking tools, makes creating and learning about style sheets fast and easy for both novice and advanced users. □

STYLE MASTER 3.5

RATING: ★★★★

PROS: Great documentation; good browser guidance; support for media types; allows simultaneous hand-coding and visual editing.

CONS: Slow code autocompletion; can't link multiple style sheets to a Web page; can't distinguish between Mac and Windows versions of Internet Explorer 5.

PRICE: $60

OS COMPATIBILITY: Mac OS X

COMPANY: Western Civilisation, info@westciv.com, www.westciv.com

CSSEDIT 1.6.3

RATING: ★★★½

PROS: Excellent code completion; lets you retrieve styles from a particular Web page; inexpensive.

CONS: Poor documentation; can't view code and CSS Properties pane at the same time.

PRICE: $25

OS COMPATIBILITY: Mac OS X

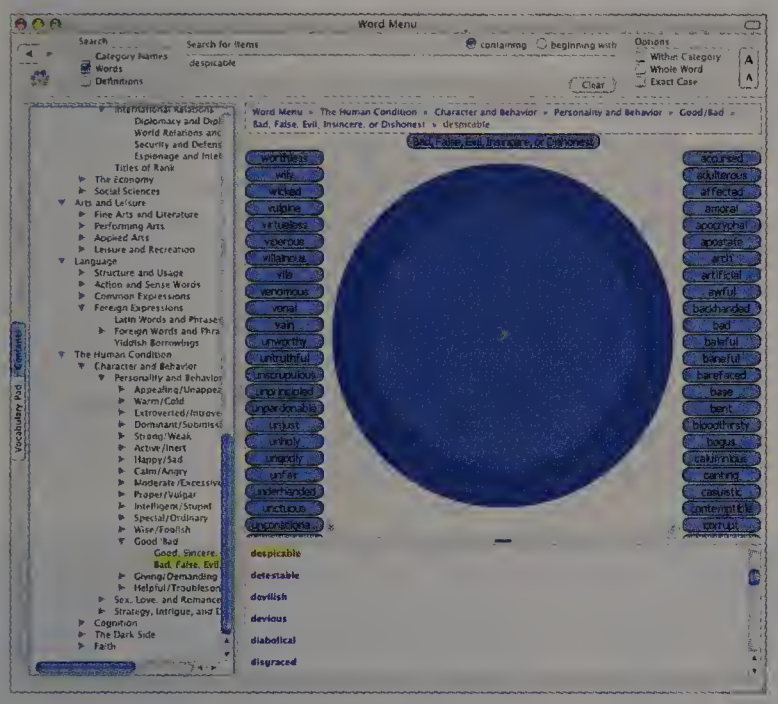
COMPANY: MacRabbit, info@macrabbit.com, www.macrabbit.com

Word Menu 2.2

Entertaining, Useful Lexicon Program Makes Good Sense

BY CHARLES PURDY

If you work with the English language—as a writer, an educator, or a student, for example—you'll find myriad ways to use Write Brothers' Word Menu 2.2, a program that is part dictionary and part thesaurus. Word Menu may prove to be indispensable if you need to familiarize yourself with terms related to a specific field, if you're having trouble finding the perfect word to fit a particularly apt metaphor, or if you're stumped by a crossword puzzle.



Vocabulary Builder The search bar at the top of Word Menu 2.2's window gives you several ways to look for the perfect word.

Word Menu is a sui generis lexicon application. It groups words (more than 76,000, according to the documentation) into lists, which are organized in searchable, nested categories. For example, the word *despicable* is in a list that's five categories deep—The Human Condition: Character and Behavior: Personality and Behavior: Good/Bad: Bad, False, Evil, Insincere, or Dishonest. That final subcategory has a list of hundreds of applicable words, from *accursed* to *worthless*. The program has hundreds of subcategories grouped under seven primary categories: The Human Condition, Nature, Science and Technology, Domestic Life, Institutions, Arts and Leisure, and Language. In some lists, there are brief definitions of the words—but not all words are defined. I assume that the list name can work as a definition, but in such a broad list of terms, further explanation would be helpful.

For a program that is, fundamentally, a massive, well-organized collection of vocabulary lists, Word Menu is remarkably practical and useful. Installation is a breeze (at setup, you can opt to install a "kid-safe" lexicon). Once installed, the program lets you search word lists, definitions, category names, or any combination thereof. You can specify your results as terms either beginning with a certain sequence of letters or containing a certain sequence of letters. This is handy if you're not sure whether *despicable* starts with *de* or *di*, for instance. However, the program doesn't offer suggestions if you enter a misspelled word.

The program's clickable results window shows you where a looked-up word can be found in the program. It offers two view options: a textual list mode and a Fractal Browser mode, which displays lists, subcategories, and categories as clickable nested circles. This is a gratifying representation of the program's organization and an entertaining way to browse. Word Menu is, in some areas, better than it needs to be—it lets you export or save word lists (as text or HTML files), and it provides tools for customizing the interface's look. It also remembers each word you look up during a session and lets you return to it. The program is generally quite thorough: its lists contain compound words, slang, and proper nouns (some thesaurus software neglects such terms).

But Word Menu isn't perfect: better and more definitions would improve it. Although many categories are strikingly complete (there's a lot of geographical information, for instance), some categories are too broad. Words cannot be categorized by part of speech, and a word's part of speech is often not given. Some important terms are missing—for example, in the Computers category there's no *FireWire* or *USB*. (From within the program, you can alert the company to omissions.) And the program would benefit from some pronunciation guides.

Macworld's Buying Advice

At $35, Word Menu 2.2 is a practical investment if you work with words or if you're a crossword aficionado. It has some flaws—which, to be fair, don't stop it from doing what it promises to do. Overall, Word Menu is a good and unique language reference. □

RATING: ♦♦♦½

PROS: Well-organized and thorough lexicon; very easy to use; customizable search parameters; attractive interface; exportable word lists.

CONS: Many words are undefined; some categories are too broad; lists can be viewed only in alphabetical order; no pronunciation guides.

PRICE: $35

OS COMPATIBILITY: Mac OS X

COMPANY: Write Brothers, 800/847-8679, www.write-bros.com

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Final Draft 7

Scriptwriting Package Lacks Polish

BY ANTON LINECKER

It can safely be argued that Final Draft is the industry-standard application for script writers. But while Final Draft 7 adds a few nice features to the program's repertoire, this buggy new version doesn't live up to its predecessors' good reputation.

The Final Draft workflow has changed little over the last few years, and that's a good thing. The beauty of Final Draft has always been that it streamlined the mechanics of scriptwriting so your brain could concentrate on the story. Version 7 is no different: Switching between character, action, dialogue, and scene formatting is still effortless. Type a character's name and click on Enter, and Final Draft automatically formats the document for a line of dialogue. Its SmartType feature can also automatically fill in established characters' names once you've typed the first letter.

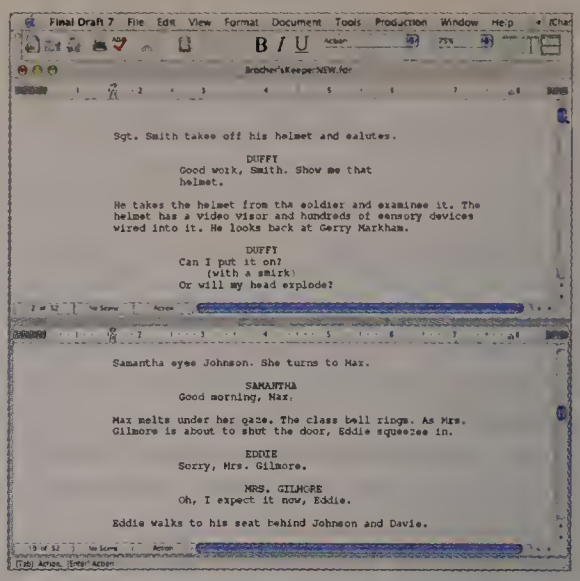
Final Draft 7 is a cross-platform product, so script swapping is easy. Its CollaboWriter feature lets multiple users work on the same script simultaneously, and even chat online about it.

The program also provides writers with a set of updated script templates for film, television, and live theater.

Version 7 lets you view two sections of your script in its Panel view—either side-by-side or stacked one on top of the other. This is helpful because it lets you review one section of a script as you write in another.

And version 7 includes a stand-alone application, called Tagger, that lets you break down and make annotations in a script (for elements such as characters, props, and wardrobe), which can then be exported to movie-production scheduling programs such as Write Brothers' Movie Magic Screenwriter.

While this sounds fantastic, version 7.0.0.33 was filled with bugs. Paging down a script caused the screen to redraw poorly, leaving line artifacts. Cutting and pasting text was hit-or-miss. Even something as fundamental as printing a script caused an instant crash (though turning off the default Format Assistant feature prevented crashes).



New View Final Draft 7's Panel view lets you easily compare and edit two sections of your script at once.

RATING: ♦♦

PROS: Panel view helps streamline writing by letting you view different parts of a script; many script templates to choose from; Tagger application exports script elements to scheduling software.

CONS: Buggy; poor technical support.

PRICE: $229; upgrade, $85

OS COMPATIBILITY: Mac OS 9, Mac OS X

COMPANY: Final Draft, 800/231-4055, www.finaldraft.com

To compound the problem, Final Draft technical support was unreachable because of the company's Kafkaesque phone system.

The company acknowledged these problems and said that they'd be remedied by the time you read this. The company has also created a new online knowledge base—available on its Web site—to help with support issues.

Macworld's Buying Advice

Final Draft 7 needs a lot more work. While the new Panel view and Tagger program are useful, Final Draft 6 users should avoid the upgrade until the kinks are worked out. □

THE CONQUEST

DiskWarrior is Now OS X Native

It's the indispensable utility that repairs problems such as disks that won't mount, files you can't trash, and folders that have disappeared. MacUser magazine said, "It's the fastest and safest data recovery utility you can buy."

Macworld magazine said, "DiskWarrior is by far the best disk utility available for the Mac; it can repair virtually any disk problem you may encounter...and it is likely to become the only tool you'll want to keep with you at all times."

David Coursey, ZDNet AnchorDesk, agrees in an article comparing disk utilities. He used it to fix a disk that no other utility could. "DiskWarrior is a great product, not just because it fixed a pretty serious screw-up, but because it showed me what it planned to do in minute detail before doing it."

But disk damage isn't the only threat to your data. As hard drives get older, the drive mechanisms

THE UTILITY COMPANY
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ProofMaster Adesso

Utility Delivers Easy, Accurate Color Proofing

BY BRUCE FRASER

PerfectProof's $499 ProofMaster Adesso is billed as a digital-proofing RIP (raster image processor). And while it does simplify in-house color proofing for designers and photographers, ProofMaster Adesso is more like a superior ink-jet printer driver.

High-end (and much more expensive) RIPs let you set limits for how much of each ink can be applied, and they let you set calibration curves to control the tonal behavior of individual inks (a process called linearization and calibration). ProofMaster Adesso lacks these features.

RATING: ★★★★½

PROS: Makes supported ink-jet printers PostScript ready; network accessible; color-accurate printers and proofers; easy to install and use.

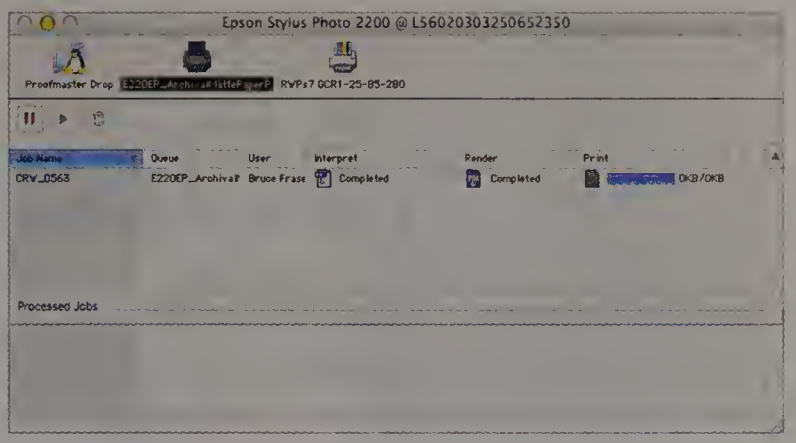
CONS: Lacks ink-limiting, linearization, and calibration features that more-sophisticated and more-expensive RIP packages offer.

PRICE: $499

OS COMPATIBILITY: Mac OS X

COMPANY: PerfectProof, 888/228-9070, http://proofmaster.net

Instead, it offers an easy, and relatively inexpensive, way to set up multiple printer queues for proofing, photographic output, or network printing. It makes the non-PostScript ink-jet printers it supports PostScript ready. It can handle native application files from PostScript applications such as Adobe Illustrator and InDesign, raw PostScript 3, and PDF through version 1.4.



In the Queue Once you've set a print sequence, just click on Print.

You define all the print settings when you set up a queue, so once you've specified a print sequence, you need only click on Print, rather than having to tunnel through all the panels in the native printer driver.

Like other ink-jet RIPs in this price range, ProofMaster Adesso supplies its own color profiles for commonly used papers on the supported printers, as well as a set of CMYK reference profiles that describe common offset printing conditions for proofing. You can use any ColorSync CMYK profile as a reference profile, so you aren't limited to the ones that come with the product. As with any proofing RIP, the accuracy of the proof depends on the accuracy of the reference profile, but with accurate profiles, the resulting proofs are a very close match to the final print job.

But ProofMaster Adesso also works stunningly well for photographic output. On an Epson 2200, it pulled much more detail out of the shadows than I've ever been able to get using Epson's own driver. Spot colors, transparencies, and duotones go through ProofMaster Adesso with no problems. Finally, ProofMaster Adesso facilitates no-hassle, color-accurate networked printing.

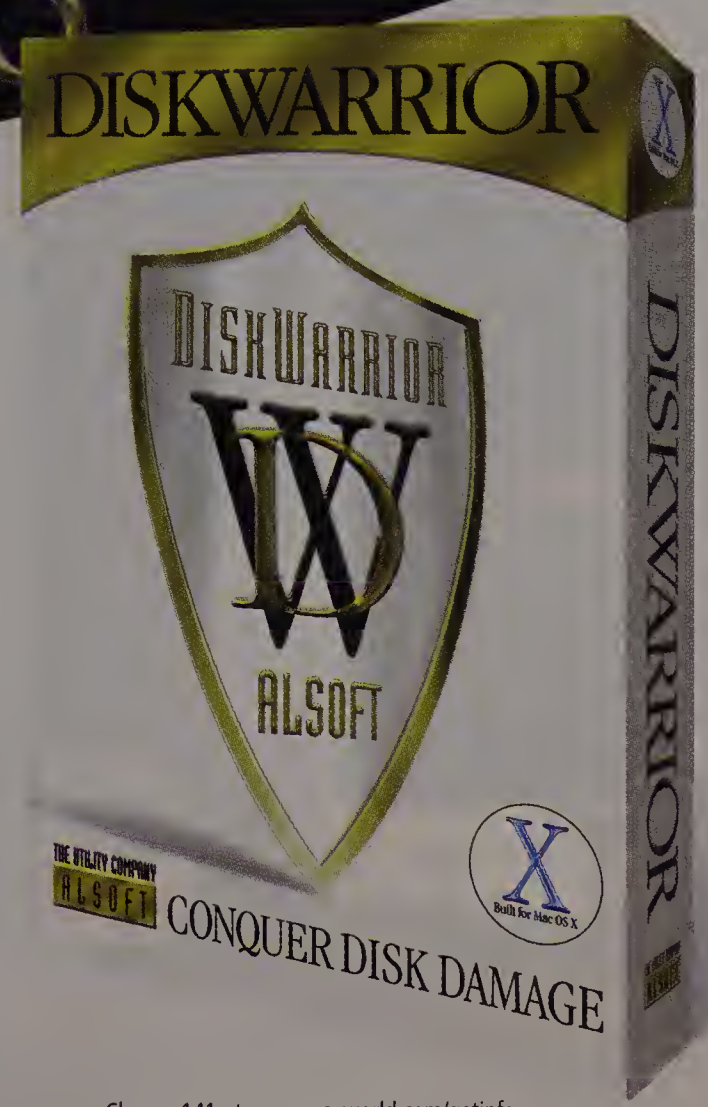
Macworld's Buying Advice

For small design shops looking for precise in-house proofing, or photographers looking for more out of a printer than its native drivers can deliver, ProofMaster Adesso is a very good deal. □

CONTINUES

begin to malfunction. Eventually, the malfunctions become so severe that the drive simply stops working. DiskWarrior can automatically test for hardware malfunctions, giving you the chance to back up your data before it's too late.

Be prepared. Don't wait until after you have a disk disaster to buy your copy of DiskWarrior. Bob LeVitus, aka Dr. Mac, said, "I feel naked without DiskWarrior." You can believe MacHome magazine when they said, "DiskWarrior is a quick, one-click solution to faster, more stable hard drives."



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- Command & Conquer Generals
- Riddle of the Sphinx II: The Omega Stone
- Didi & Ditto Kindergarten
- Pharaoh's Gold
- Shrek 2: The Game

The Game Room

The Command & Conquer series helped define the real-time strategy (RTS) genre. But despite continued success on the PC, the series hasn't appeared on the Mac since its initial release more than six years ago. Now Aspyr has brought the game back to the Mac, with Command & Conquer Generals—a fun, challenging, and thoroughly modernized game.

Active Duty You can take turns commanding the American, Chinese, or mythical GLA guerrilla army in the new RTS game Command & Conquer Generals.

Command & Conquer Generals includes all the hallmarks of a classic RTS game—you'll command military units, manage resources, and create different types of buildings, all while trying to take control of enemy territory. However, the scope and nature of this game make it significantly different from its forebears. Instead of just pitting two warring superpowers against each other, Command & Conquer Generals better reflects the realities of modern warfare. You'll navigate between three different armies—the United States, China, and a fictional terrorist organization called the GLA. This lineup shifts the balance of power within the game. Instead of just trying to build up fast, powerful units, you have the option of using less-conventional means of warfare, such as salvaging your enemy's weapons or committing acts of terrorism.

A sizable single-player mode lets you take command of each major power as you try to complete more than half a dozen missions each. You can also face off against the computer in skirmish battles or go online to compete against other Mac players. Despite early suggestions that the game would allow cross-platform competition, Aspyr ultimately wasn't able to make it work. (The game arrives more than a year after its PC counterpart.) Instead, you can connect to other Mac players through the online GameRanger service or by entering TCP/IP addresses, if you prefer a private game.

Command & Conquer Generals isn't for dabblers. The game's Hard and Brutal levels are exactly that—unless you're a superior RTS player, the AI will lay you out flat. I'm an RTS fan and I couldn't handle it at the Brutal level. Heck, Normal was enough for me most of the time.

Fans of other RTS games, such as Warcraft, will likely need to unlearn some habits before they're able to play Command & Conquer effectively. I found the process of controlling troops obtuse. I kept deselecting units instead of directing them, and then discovering later that I'd lost a prime parcel of real estate because my soldiers were standing around gabbing instead of garrisoning a building. While this isn't really a flaw with Command & Conquer, the different approach may frustrate RTS fans who have grown accustomed to other games.

Graphics in the Command & Conquer series have come a long way since its last Mac release. No longer is Command & Conquer limited to tiny, 2-D, bitmapped sprites rendered in isometric perspective. The game now features richly detailed and lushly animated polygonal graphics, which you can zoom in on to get a better view. Tanks leave track marks, and exploded vehicles and ordnance leave marks on nearby walls. It's all very impressive.

Command & Conquer Generals requires a 1GHz Mac with a G4 or faster processor and a decent graphics card. But even my dual-1GHz Power Mac G4 equipped with an ATI Radeon 9800 Pro Mac Edition

continues

COMMAND & CONQUER GENERALS

RATING: ♦♦♦♦

PROS: Rich and detailed graphics; very challenging AI.

CONS: No cross-platform multiplayer capabilities; steep system requirements; came late to the Mac.

PRICE: $50

OS COMPATIBILITY: Mac OS X

COMPANY: Aspyr Media, www.aspyr.com

video card got bogged down when there was a lot happening on screen at once.

The game is rated T, for Teen, and is chock-full of violence and explosions.

The Bottom Line Despite the steep system requirements, publishing delays, and lack of cross-platform support, Command & Conquer Generals is a fun—and seriously challenging—addition to the real-time strategy genre.

Omega Man

If you're a fan of graphical adventure games such as Cyan's legendary Myst series, you should check out Riddle of the Sphinx II: The Omega Stone, from The Adventure Company. This beautifully rendered game features a globe-trotting adventure and plenty of challenging puzzles—in fact, there may be more challenge here than you're ready to take on.

Riddle of the Sphinx II is a sequel that picks up just a few minutes after the first game ends. However, you don't need to be familiar with the first game to play. In Riddle of the Sphinx II, you're an archaeologist whose colleague has just discovered an ancient scroll bearing ominous warnings that prophesy the end of the world. As you unravel the scroll's mysteries, you'll travel to locations as varied as the Great Pyramid of Giza, Chichén Itzá, Easter Island, and Stonehenge.

The game's action centers on solving puzzles and exploring. You'll spend much of your time uncovering clues, solving puzzles and riddles, and piecing together bits of information from research notes, maps, and other data you'll collect on the way. I found the game's puzzles tremendously challenging. They're certainly not for the impatient.

Navigating Riddle of the Sphinx II, however, couldn't be easier. You simply point and click with your mouse. The game's cursor is dynamic, so it shows when you can move forward or back or whether you can interact with spots or objects. Although each frame is a prerendered image, you can pan in 360 degrees to get a full sense of where you are. Occasionally, you'll even interact with other people—live actors who have been blue-screened into the action. The game's sound effects and soundtrack are top-notch.

To play, you'll need a 600MHz G3 or faster and 1GB of free disk space. The game play is divided between four CDs, so you'll spend a good bit of time switching out discs. It's a shame the developer didn't combine the action onto a single DVD instead—after all, every current Mac has a built-in DVD player.

The Bottom Line Riddle of the Sphinx II: The Omega Stone has plenty of challenges to keep fans of graphical adventure games busy for quite some time. However, be prepared to put a lot of effort into puzzling out the game's clues.

An Epic Adventure In Riddle of the Sphinx II, you'll search foreign lands for clues that will help thwart a doomsday prophecy.

RIDDLE OF THE SPHINX II: THE OMEGA STONE
RATING: 3½
PROS: Vivid environments to explore; lots of clues to collect; nice soundtrack.
CONS: Challenging puzzles are often frustrating; game is spread over four CDs.
PRICE: $30
OS COMPATIBILITY: Mac OS X
COMPANY: The Adventure Company, www.adventurecompanygames.com

Busy As a Beaver

Didi and Ditto are red and blue beavers who inhabit a land of colorful and eccentric cartoon creatures such as Couki the

continues

FIRST LOOK | Shrek 2: The Game

By the time you read this, Aspyr should be ready to release a new game based on the hit computer-animated movie *Shrek 2*.

Shrek 2: The Game is a third-person action adventure that puts you in the scenery and situations depicted in the movie (as well as some completely new situations). In this game, you'll journey to the land of Far, Far Away; explore the Spooky Forest; visit Billy Goat Gruff's Bridge; and more. There's action but no real violence, so this game is suitable for the entire family.

BETA TESTED

SHREK 2: THE GAME
PROS: Fun action for the whole family; ties in with the movie.
CONS: Not challenging; simplistic.
PRICE: $30
OS COMPATIBILITY: Mac OS X
COMPANY: Aspyr Media, www.aspyr.com

You'll take turns playing as each of the game's main characters, including the giant green ogre Shrek, his cohort Donkey, and the sequel's breakout star Puss-in-Boots. Each character has unique moves and abilities. For example, Shrek is slow and ungainly, but he can knock people off their feet with his powerful punches. Donkey's four-legged gait makes him fast and gives him quite a kick. And Puss-in-Boots is an agile jumper and climber.

Game play is simple and straightforward—but it's a little bland. You control movements via the keyboard and mouse—jumping, punching (or kicking, depending on your character), and otherwise interacting with the environment. Your characters will leap onto platforms and giant fungi; activate buttons, locks, or other simple puzzles; and shimmy along ropes and overhead bars. As you travel, you'll learn to avoid pitfalls and other traps while collecting as many coins and power-ups as you can. At the end of the game, you can use the coins to purchase magical items such as potions or points.

What's New, Pussycat? Shrek 2: The Game lets you take control of Shrek and his friends—including my favorite, Puss-in-Boots.

The Bottom Line Shrek 2 certainly doesn't break new ground, but if you want a game that's fun for the whole family, it's worth a look.

ICON BY PAUL HOWALT

WHERE WERE YOU DURING THE ROMAN MISSILE CRISIS?
LIFE STOOD STILL FOR 13 MINUTES. History changes in an instant. Never more so than in Rise of Nations, a new real-time strategy game from Brian Reynolds, lead designer of Civilization II. Experience the depth of turn-based strategy games at an RTS pace through 6,000 years of history and 18 ancient nations. It's the most intense RTS of its kind. Think fast. Fight faster. Defend, defeat, bargain, befriend, plot and plunder. Do it all under the gun with zero margin for error. Nothing is historically impossible, and only the quick and the brazen survive.
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Choose 148 at www.macworld.com/getinfo

Kid's Play Learn to count as you help Didi and Ditto find their fruits and vegetables in this learning adventure.

DIDI & DITTO KINDERGARTEN
RATING: ♦♦♦♦½
PROS: Chock-full of engaging learning activities; enchanting graphics; clickable hotspots.
CONS: Clunky game engine.
PRICE: $20
OS COMPATIBILITY: Mac OS 9, Mac OS X
COMPANY: Kutoka Interactive, www.kutoka.com

dog, Zolt the wolf, and HipHop the rabbit. They are also the title characters of Kutoka Interactive's latest learning adventure, Didi & Ditto Kindergarten, aimed at children four to six years old.

When Didi and Ditto get caught up in a chase between Zolt and HipHop, Zolt captures one of the beavers (your choice of character will determine which one) and refuses to let go until he's fed. To free your sibling, you'll set off on an adventure to track down six fruits and vegetables—Zolt, it turns out, is a vegetarian.

Along the way, a variety of activities helps reinforce early learning skills. In one game, for example, Grumpy Bug must mix some grease for a wagon you and Couki need. His machine works by spelling out the letters of different words. In another activity, you'll practice counting skills by catching bug-eyed bees in midflight and placing them in a beehive.

Each screen features rich and colorful graphics. To keep things interesting, the scenes are rife with *clickables*—hotspots that uncover an animation, a comical interlude, and other surprises. All told, there are 14 activities that cover the gamut of early learning, including counting and sequencing, identifying shapes and colors, pattern matching, phonics, rhyming, spelling, and early math. Three levels of difficulty and some randomization will keep kids coming back for more.

The game's Macromedia Director–based engine is a bit slow on the draw. As a result, the animations didn't always sync up with their soundtracks and reaction to input was occasionally slow. But Didi & Ditto's charming graphics, engaging game play, and top-quality voice acting help compensate for these limitations.

The Bottom Line Kudos to Kutoka for developing yet another rich and challenging world in which kids can play, learn, and explore. This gem belongs on the shelf of any parent looking for an original and fun game for their kindergartner.

Tomb Raider

If you're looking for a simple 2-D scrolling game to play in your spare time, I recommend checking out Pharaoh's Gold, from F. C. Covett and Danlab Games. This arcade-style action puzzle is a throwback to the early nineties, and it's good fun.

In Pharaoh's Gold, you must save the world from the Pharaoh's curse by retrieving all of the tomb's stolen gold. Despite the simple premise, there's more to the game than meets the eye. At one point, you'll even be whisked off to an alien world as you seek to uncover the Pharaoh's mystery.

PHARAOH'S GOLD
RATING: ♦♦♦
PROS: Simple game play; built-in map editor; inexpensive.
CONS: Demanding system requirements for such a simple game.
PRICE: $5
OS COMPATIBILITY: Mac OS X
COMPANY: Danlab Games, http://pharaohsgold.danlabgames.com

Walk like an Egyptian Pharaoh's Gold is an old-school throwback that's lots of fun.

Each game level is a maze from which you must collect coins and treasure. Do this successfully, and you'll unlock an exit gate. Of course, snakes, treasure hunters, mummies, and other troublemakers will get in your way. You'll have to learn their movement patterns to avoid them.

Playing Pharaoh's Gold is extremely easy: the keyboard's W, A, S, and D keys control your movement. You can scroll the map to see what lies ahead by holding down the spacebar.

Although the game uses a sprite-based engine and simple game play, the developer used OpenGL to manage the 32-bit graphics. The results are attractive but unnecessarily demanding. You'll need a 450MHz G3 or faster and OS X 10.2—that's certainly more than games of this complexity demanded a decade ago.

Pharaoh's Gold has original sound effects and a pleasing soundtrack. And if you really like the game, you can use its built-in map editor to create new level designs.

Best of all, you get all this for just $5. You can even download a seven-level demo version to try out before you buy.

The Bottom Line Pharaoh's Gold harks back to an ancient time: no, not to the reign of the pharaohs themselves, but to when simple game play was enough for hours of entertainment. □

Recently Reviewed

CALL OF DUTY

♦♦♦♦½; Aspyr Media, www.aspyr.com; $50

In June 2004's *Game Room*, I took an early look at Call of Duty, Aspyr's latest entry into the popular genre of World War II first-person shooters. Now the game is out, and the finished product is definitely worth picking up.

Made by some of the same designers that created Medal of Honor: Allied Assault, Call of Duty features superior graphics and a grander scale of battle. The single-player campaign lets you switch between American, British, and Russian soldiers as you take on the Nazis. The game's flexibility ensures that there's more than one way to complete a mission. The game also supports cross-platform multiplayer challenges, giving you plenty of replay value after you're done with the single-player missions.

Contrary to popular belief, MacCentral.com Senior Editor PETER COHEN is only sometimes mistaken for an ogre.

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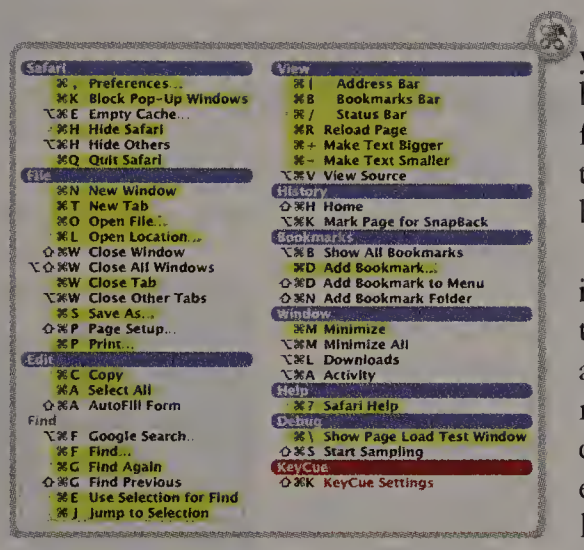
- KeyCue
- HistoryHound
- TheHotFolder
- Preferential Treatment
- iPaste
- Plain Clip

Mac Gems

Mac applications have long used keyboard shortcuts (⌘-C to copy, for example) to make it easier to perform common actions. However, learning those shortcuts can be frustrating—you have to search the current application's menus to find the desired command, and then remember the keyboard shortcut associated with that command when it comes time to use it.

The $15 **KeyCue 1.0**, from ergonis software (★★★★; www.macility.com), offers a useful alternative. After installing the utility, hold down the ⌘ key within any application for a certain amount of time (which you determine), and up pops a window summarizing all the shortcuts *currently available* from within that application. (In most applications, menu items are dimmed if you can't currently access them—Copy, for example, isn't available if no content is selected. KeyCue will show the shortcuts for available menu items only.)



Keyboard Crib Notes KeyCue shows you keyboard commands so you don't have to remember them.

KeyCue also shows custom menu shortcuts you've defined using the Keyboard & Mouse preference pane, and you can configure it (via its preferences dialog box) to show shortcuts in submenus and for services (accessible via the Services submenu). When you press modifier keys, KeyCue even highlights the shortcuts accessible via that combination of modifiers.

One feature I'd like to see is the ability to use the mouse to click on a command *within* the KeyCue window. But even without this feature, KeyCue is extremely useful. I've also found it to be a great "cheat sheet" that actually helps me learn the shortcuts.

History Revisited

Apple's Safari has a decent history feature, but it allows you to find sites you've visited based only on their URLs or titles. What if you remember a few words or the name of a product from a Web page, but you can't remember where you saw it? St. Clair Software's $20 **HistoryHound 1.0.2** (★★★½; www.stclairsoft.com) may be able to track down the page for you.

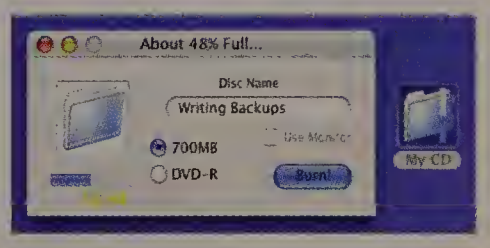
Leave HistoryHound running and it periodically indexes the contents of the sites you've recently surfed. The app can also index sites you've bookmarked (which can take quite a while the first time you index if you have a lot of bookmarks) or any other files or folders on your hard drive. It then provides a searchable database of those contents.

Type a search term or phrase into the search field, and the top pane of the window lists all sites that include your criteria, ranked by relevance (how closely HistoryHound thinks each page matches what you're looking for), page title, URL, or date—which is most useful if you remember approximately when you visited a page. Select a page, and the bottom pane shows its contents with the search term highlighted. Double-click on a page to open it in your browser.

HistoryHound can also perform more-complex Boolean and include- or exclude-variable searches, and you can even assign the app a hot key for quick access. If you've ever needed to find a Web site you've visited (in Safari or Internet Explorer), you'll likely find HistoryHound to be your browser's best friend.

Pack It In

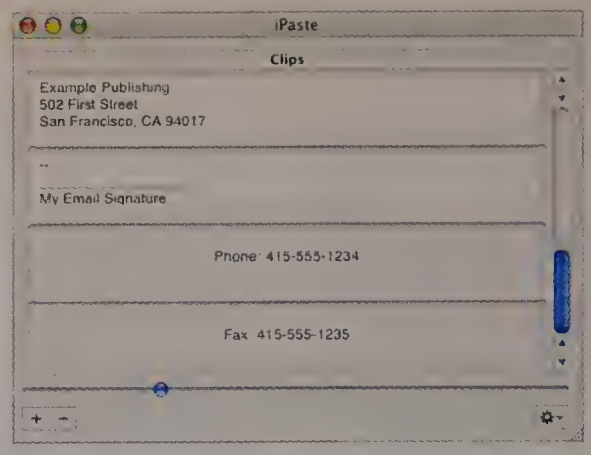
OS X makes burning files onto CDs and DVDs fairly easy. You insert a blank disc and then copy files to the image that appears. My only complaint is that OS X assumes I'm ready to burn the disc right then and there—I can't use my optical drive until I'm finished. Plus it's a hassle—a minor one, but still a hassle—to figure out how much space is left on the CD.



Filled to the Brim TheHotFolder provides visual feedback on how much room is left on your CD-to-be.

Ronin no Sakurakai Softronics' $15 **TheHotFolder 1.0** (★★★½; http://kaisakura.com/) is a nifty utility that makes burning files to a CD or DVD even easier. Drag a folder into the TheHotFolder window and choose whether you're planning on burning a CD or a DVD. TheHotFolder shows you how much space is available on the disc that you'll eventually burn, and

continues



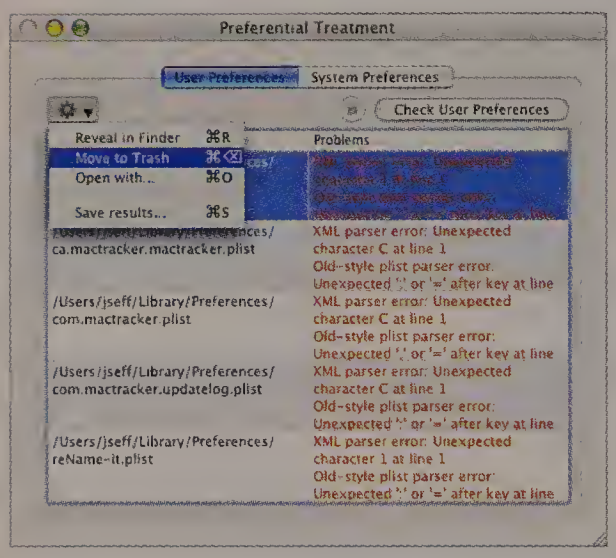
Convenient Clips iPaste stores frequently used text so you don't have to type the same things over and over again.

updates this information as you add more items to your folder. Even cooler, it adds a progress bar to the folder's icon *in the Finder*—you don't even have to switch to TheHotFolder to see when your folder has reached your media's limit. When you're ready to burn your disc, you simply give it a name in TheHotFolder, click on Burn, and then choose whether you want to burn a Mac or Windows disc. Only then do you insert a disc.

TheHotFolder does have one odd restriction: it won't run if the path to the application contains non-alphanumeric characters (including spaces). Hopefully the developers will fix this limitation in a future version, because I really like the utility's simple approach to burning discs.

Preference Prober

Longtime Mac users know that one of the most common causes of problems with applications or the OS itself is a corrupt preference file. Finding and disposing of these damaged files is one of the best ways to fix (and even avoid) problems. But what most users don't know is that OS X actually includes a neat command-line utility for checking preference files: *plutil* (for "property list utility"). This little gem of a program checks preference files for syntax problems; chances are if a preference file doesn't follow the proper XML syntax, it's damaged.



Bad Prefs, Begone Preferential Treatment helps you find corrupt preference files.

But not everyone likes using Terminal to run command-line utilities. Jon Nathan's free (donations accepted) **Preferential Treatment 1.0.1** (♦♦♦♦; http://homepage.mac.com/jonn8/as/) means you don't have to—it provides a nice Mac interface for the plutil command. Using Preferential Treatment, you can scan both user-level preference files (those in your user folder: Library: Preferences folder) and system-level preference files (in the root Library: Preferences folder); you can also scan other folders. Preferential Treatment scans the appropriate directory (you'll need admin access to scan all files) and presents a list of any files that have XML errors. You can then use the Action menu to reveal the troublesome files in the Finder, immediately move them to the Trash, or open them in another application (a text editor, or a *.plist* editor such as PrefEdit [www.bresink.de/osx/]).

The plutil approach isn't foolproof—some files that aren't proper XML files work fine, and some that are perfectly formatted can still cause difficulties—but it's a good place to start if you're experiencing problems that you suspect are due to a bad preference file.

Clipboard Stationery

In my online travels (that is, work), I tend to type certain pieces of information over and over—my e-mail address, postal address, phone number, even my business credit card number. I've tried lots of techniques for making these snippets of data easy to access, from text clippings to software utilities, but I've never been completely satisfied. Recently I've been using IGG Software's $10 **iPaste 1.0.2** (♦♦♦½; www.iggsoftware.com), and it's beginning to grow on me.

iPaste lets you store any number of bits of information—text or images, for example—that you tend to use frequently. Once you've stored these "clips," you can paste them into any document or text field in one of three ways: via the iPaste menu-bar menu; by pressing a keyboard shortcut (control-option-2 for clip 2, for example); or, perhaps most conveniently, by way of a contextual menu. You can also see your clips in a viewer at any time to remind you which clip corresponds to which keyboard command.

As a bonus, iPaste keeps track of the ten most recent Clipboard contents, so you have easy access to anything you've copied of late. The program has some quirks—the keyboard commands don't seem to work in all applications all the time—but for an early version, it shows a lot of promise.

Paste Plainly

Raise your hand if this has ever happened to you: you've copied some text from a Web page, an e-mail message, or a document in order to paste it somewhere else, but when you pasted the text, it was formatted like the original source, forcing you to select it and reformat it. If your hand is up, you'll like Carsten Blüm's free (donations accepted) **Plain Clip 1.0.1** (♦♦♦♦; www.bluem.net/downloads/plain-clip_en/).

All Plain Clip does is strip the formatting of text in the Clipboard—nothing more. Just put it in your Dock or assign it a key combination using a macro or launcher utility. Then copy a chunk of formatted text, activate Plain Clip, and paste your now-plain text into the desired document. It sounds simple, and it is. If you copy and paste a lot of text from varying sources, Plain Clip is for you. □

Contributing Editor DAN FRAKES (www.danfrakes.com) is the author of *Mac OS X Power Tools*, second edition (Sybex, 2004) and an editor at MacFixIt.com. Send your thoughts on this column, or on things you'd like to see in future columns, to macgems@macworld.com.

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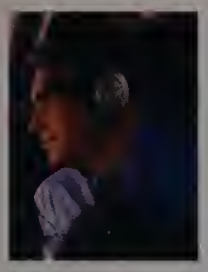

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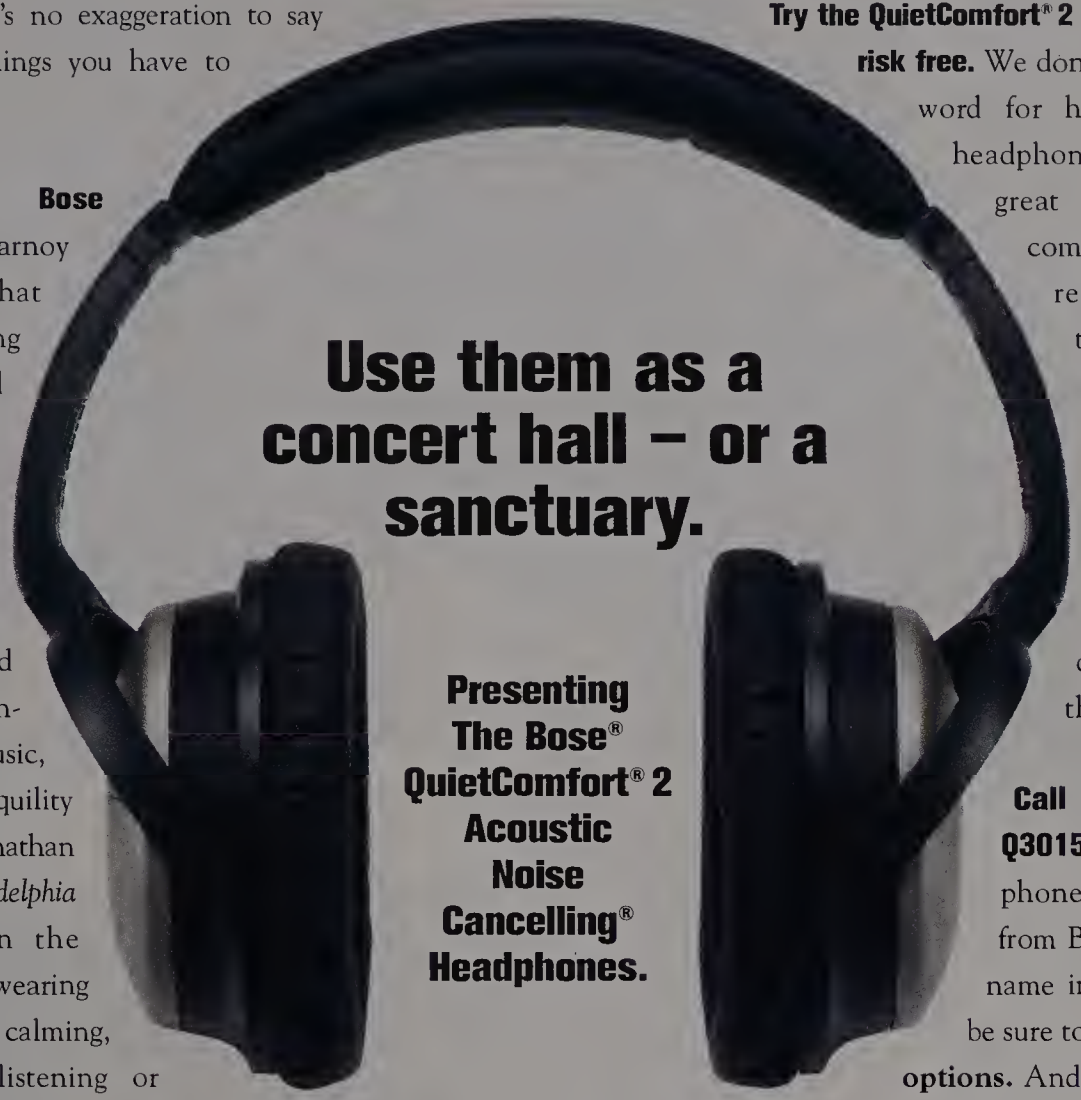

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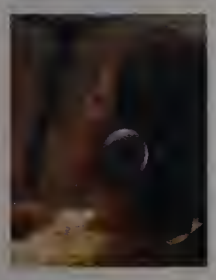

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The Next Do-It-Yourself Mac

Maximize Your Hardware—from Installing a SuperDrive to Building a Music Server

Photograph by Peter Belanger

YOU BOUGHT an early Titanium PowerBook and then kicked yourself when the next model shipped with a SuperDrive. You're pining for a digital photo frame, but you don't have $1,500 to spare. You want to digitize and store your massive music collection and share it with everyone in your home, but you don't know where to start.

Your hardware dreams can come true. We'll show you how to upgrade, supersize, fine-tune, and expand a wide range of products. Just like last year's "Do-It-Yourself Mac" (August 2003), this guide has step-by-step instructions and easy-to-follow pictures that will make you a do-it-yourself expert in no time. >

CONTENTS

60 Add a SuperDrive to an Original PowerBook G4
62 Spruce Up Your Hardware
63 Blur the Lines between Mac and TV
63 Game in True 3-D
64 Turn Your Mac into a Picture Frame
65 Network with Bluetooth
66 Build Your Own Music Server
67 Store More
68 Accessorize Your iSight
68 The Versatile iPod Mini Belt Clip
69 Fax from Your Mac

DIFFICULTY LEVELS

EASY MEDIUM HARD

ADD A SUPERDRIVE TO AN ORIGINAL POWERBOOK G4

HARD

What You'll Need:
#1 Phillips screwdriver
#8 Torx screwdriver
Grounding strap (optional)
Nonmetal probe tool (optional)
Razor blade

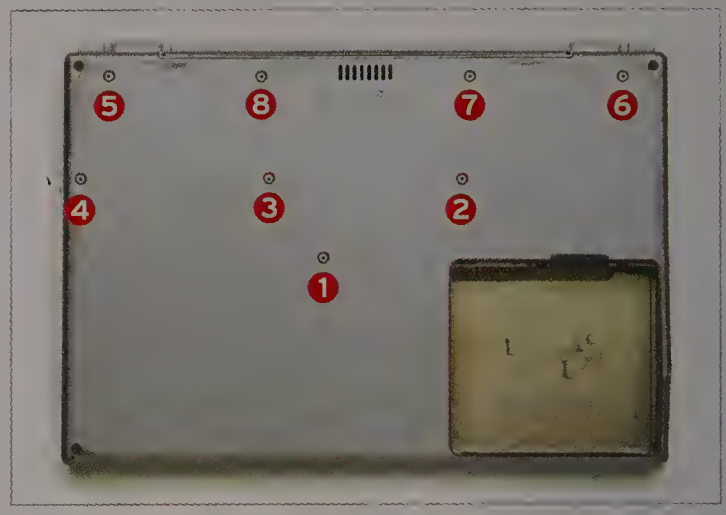
THE ORIGINAL POWERBOOK G4 (released in January 2001) was a stunning piece of engineering, with its beautiful 15.2-inch liquid-crystal display and slot-loading DVD-ROM drive enclosed in a 1-inch-thick titanium case. It was almost a year later that Apple made CD-RW and Combo drives available as options, and anyone wanting a SuperDrive-equipped PowerBook G4 had to wait until November 2002. With the recent availability of high-speed replacement internal optical drives, proud PowerBook G4 owners can satisfy their desires to burn without breaking the bank. (Other World Computing [www.macsales.com] offers a 24× Combo drive [$230] and a 4× SuperDrive [$400]. See our review of OWC's Mercury Ti SuperDrive 4× on page 42.)

If you're comfortable replacing the internal hard drive on a PowerBook, you should have no problem installing a new optical drive. A few standard caveats: First, replacing your optical drive will void your warranty. Second, the components inside a PowerBook are susceptible to damage by static electricity. As such, you're encouraged to use a grounding strap and to refrain from touching any components inside the computer unless necessary. Third, be very gentle while taking apart and reassembling your PowerBook.

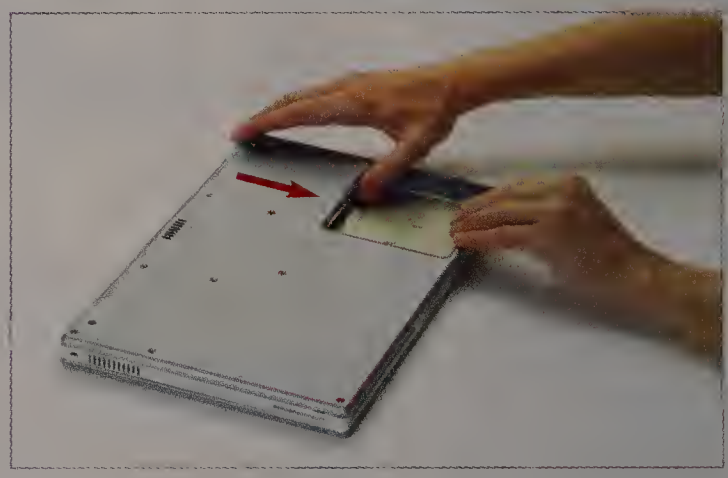
The following instructions show you how to replace the DVD-ROM drive in an original PowerBook G4 with the Mercury Ti SuperDrive 4×. Although the general process is very similar for other models and types of drives, these instructions apply only to the original Titanium PowerBook G4. Your drive may come with its own instructions, but not all do. And if you purchased a drive on eBay or salvaged one from another PowerBook model, you're completely on your own. That's where our instructions will really come in handy.

Step 1: Remove the Battery and the Bottom Case

You must remove the lithium-ion battery from the PowerBook to prevent the computer from accidentally turning on while it's disassembled. If your PowerBook is powered up, shut it down and wait 30 minutes to allow the internal components to cool. Now place a soft towel (to prevent sliding and scuffing) on a flat surface with plenty of room, and then place the closed PowerBook top-down on the towel. Slide the battery's latch to the right, and then lift and remove the battery. Next, using a #1 Phillips screwdriver, carefully remove the eight visible screws on the bottom case in the order shown. Place the screws in a small container so that you don't lose them. All the screws are the same size, so don't worry about keeping them in order.



Now that the screws are removed, gently pull the right side of the bottom case toward you, with one hand near the display hinge and the other hand pulling from within the empty battery compartment. The right side should pop free with little force.



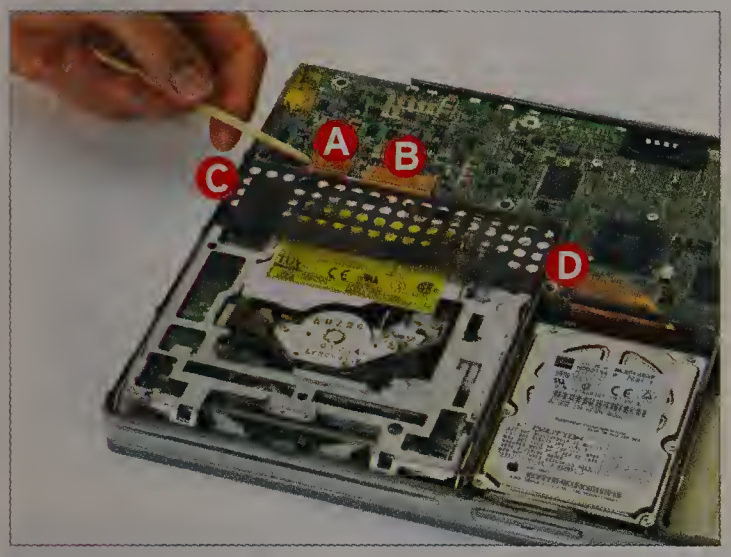
Release the left side of the bottom case in a similar fashion. Now carefully lift the bottom case at the edge furthest from you, and pivot it toward you until the front edge comes free from the small retaining clip that is located at the center of the optical-drive slot. The bottom case should be easy to remove. If you feel a lot of resistance, don't force it. Stop and make sure that all the screws have been removed, and that the right and left sides are properly released.

STEP-BY-STEP PHOTOS BY PETER BELANGER

Step 2: Remove the Drive Connector and the Plastic Shield

Using a probe tool (or your fingers, if you're feeling daring), carefully pry off the ¾-inch optical-drive connector Ⓐ from the logic board, rocking it from one side to another in small increments if necessary. Do not pull on the cable itself or pry off the wider PMU (power management unit) connector Ⓑ adjacent to the optical-drive connector. If any tape is covering the connectors, gently peel it off so that you can reuse it after installing the replacement drive.

If your PowerBook model has a black plastic shield covering the rear of the optical drive, you'll need to slice the left Ⓒ and right Ⓓ edges of the shield with a sharp razor blade. Do not cut the shield off entirely—just flip it up to prepare to remove the optical drive.



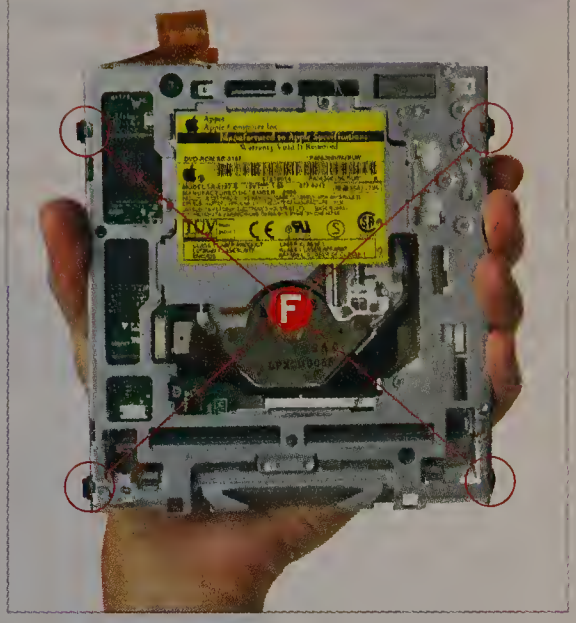
Step 3: Remove the Optical Drive

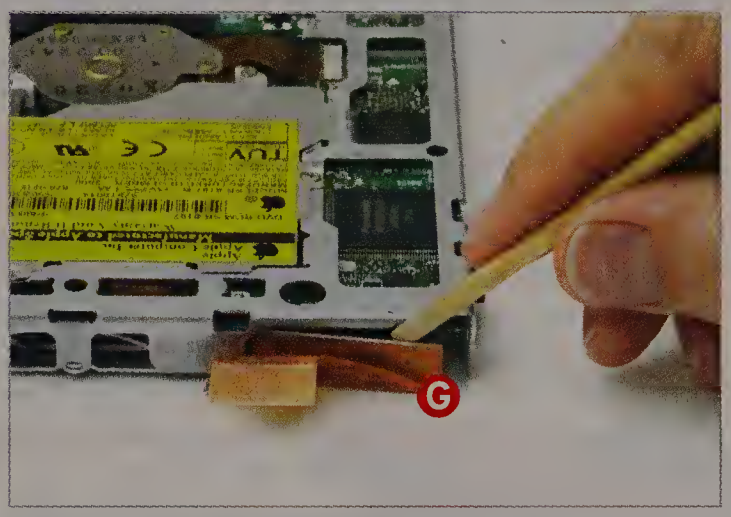
Grasp the leftmost metal edge of the optical drive Ⓔ, and gently lift up until the left side of the drive releases from the PowerBook. Then pull to the left and remove the drive completely. Always hold the drive only by its metal edges. Never touch the green circuit board or connectors toward the rear.

Step 4: Remove the Drive Screws and the Connector

Using a #8 Torx screwdriver, remove the four screws at the corners of both the left and right sides of the optical drive Ⓕ. As you do so, take care to note the shape and position of the rubber mounts surrounding the Torx screws. While the screws are identical, these rubber mounts aren't, and it's important that you install them on the replacement drive in the exact same location and orientation. If all four rubber mounts aren't on the drive, look inside the PowerBook to locate any that may have fallen off.

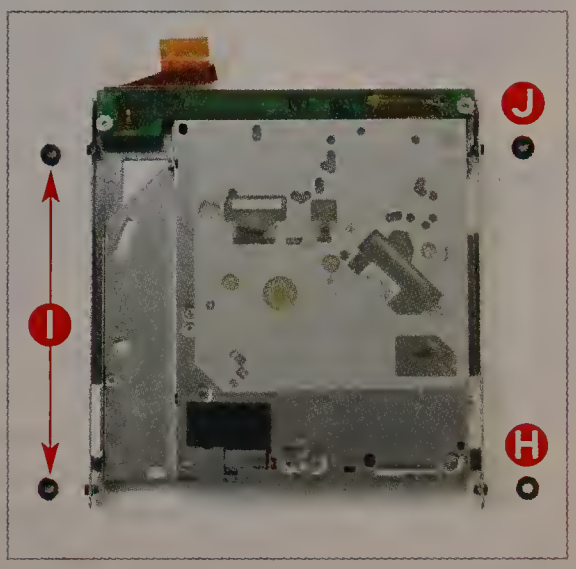
Using a probe tool, carefully pry off the optical-drive connector Ⓖ from the rear of the optical drive.





Step 5: Attach the Connector, Screws, and Rubber Mounts to the New Drive

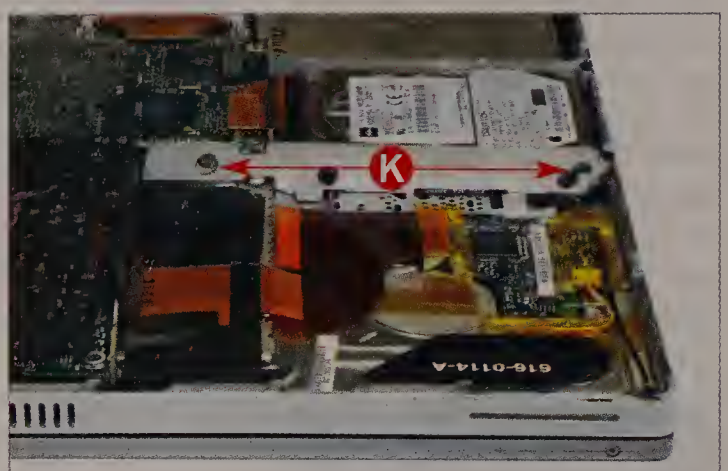
Now take your replacement drive, and attach the optical-drive connector securely to the rear of the replacement drive (in the same location as the drive you just removed it from). The connector is keyed to prevent it from attaching incorrectly, so if it doesn't fit, don't force it. Then use the #8 Torx screwdriver to attach the four screws at the corners of both the left and right sides of the replacement optical drive. Now place the rubber mounts on the correct screws—otherwise the bottom case won't close properly and the drive won't align with the slot on the front of the case. Lay the optical drive flat in front of you, with the connector at the left rear. Place the flat, circular rubber mount on the front right-side Torx screw Ⓗ. This leaves you with three rubber mounts, two of which are identical. Place these on the left-side Torx screws, with the wider portion flush against the metal edge, and the half-moon shape facing up Ⓘ. The remaining rubber mount goes around the rear right-side Torx screw, with the wider portion flush against the metal edge Ⓙ.



ADD A SUPERDRIVE (CONTINUED)

Step 6: Install the New Drive

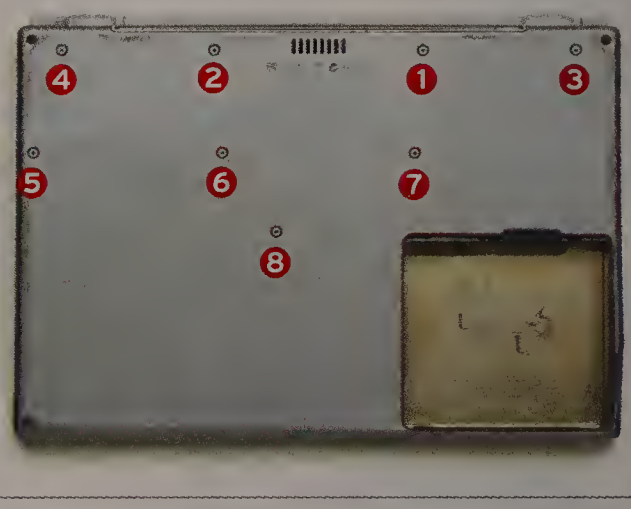
Flip up the black plastic shield so that it's out of the way, and then carefully guide the two rubber mounts on the right side of the optical drive into the receiving holes on the frame that separates the optical drive and the internal hard drive K.



Gently push in and down on the left edge of the optical drive, making sure the PowerBook's case doesn't pop off the two remaining rubber mounts and the optical-drive connector cable isn't pinched behind the drive. Then flip the black plastic shield down over the rear of the drive. Line up the optical-drive connector on the logic board, and press firmly until it's properly seated L. If the connectors were covered by a piece of tape, put the tape back in place now. You're almost done.

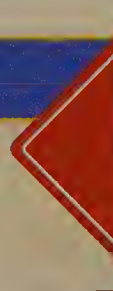
Step 7: Reassemble the PowerBook Case

Place the front of the bottom case along the front lip of the PowerBook, and then lay it down toward the rear, essentially pivoting it back into its original position. Gently push down and back until you have visually aligned the screw holes. Insert the eight screws into the holes in the bottom case, and then partially tighten each to ensure that the holes are properly aligned. Now securely tighten the screws in the order shown. If you encounter any serious resistance, don't strip the screw by trying to force it. Instead, try unscrewing and then reseating it, or pushing the bottom case toward the rear to alleviate lateral pressure on the screw's threads.



Now pop the battery back in place, and power up your improved PowerBook. You can now launch Apple System Profiler (OS X 10.2 and earlier) or System Profiler (OS X 10.3) and check the ATA bus to verify that the PowerBook recognizes the replacement optical drive as a burn-capable drive. If so, you should be ready to burn in all your favorite applications, including iDVD, iMovie, and iTunes. If not, check with your optical drive's vendor for any driver that may be necessary.—OWEN W. LINZMAYER

STEP-BY-STEP PHOTOS BY PETER BELANGER



SPRUCE UP YOUR HARDWARE

GOT THE HANKERING to enhance your hardware but need a little help? Here are three ways to make improvements without starting from scratch:

1. The $100 Sweet Multiport, from Gee Three (www.geethree.com), adds one USB and two FireWire ports, plus a 5-in-1 memory-card reader (for CompactFlash, Microdrive, Memory Stick, Secure Digital [SD], and MultiMediaCard [MMC]), to Power Mac G3 or G4 towers. The Sweet Multiport consists of a PCI card and a front-panel card that sits in your Mac's second drive bay.

2. Wiebetech's G5Jam (●●●½; July 2004; $900 to $2,200; www.wiebetech.com) doubles the internal storage potential of the Power Mac G5, allowing up to 1TB of storage with two extra Serial ATA drives. The G5Jam includes a new side door for mounting the drives, a Serial ATA PCI card, cables, and two or four Serial ATA hard drives.

3. For the ultimate in hands-off upgrades, ColorWare (www.colorwarepc.com) can add a bit of splash to your Apple hardware by painting your iPod ($49), or your iBook or PowerBook ($399), in one of 20 colors. Or you can send a color sample and get your iPod custom painted for an additional $99.—JONATHAN SEFF

BLUR THE LINES BETWEEN MAC AND TV

EARLIER THIS YEAR Steve Jobs told *Macworld*, "We don't think that televisions and personal computers are going to merge." Yet despite Apple's best efforts to keep the two apart, the evidence suggests that television is indeed part of the digital hub. Here's a glimpse at how to get your TV and your Mac to play well together.

Watch TV Whether you're a college student in a cramped dorm room or someone who simply doesn't want to shell out money for a second (or even first) TV set, you can watch TV on your Mac and enjoy TiVo-like control over your TV shows. Miglia's $149 AlcheTV DVR (www.miglia.com) is a PCI card that fits in your Power Mac G4 or G5. Elgato Systems (www.elgato.com) offers two external devices that connect to your Mac via USB and FireWire, respectively: the $199 EyeTV (●●●½; November 2002) and the $349 EyeTV 200 (●●●●; July 2004). The EyeTV records in MPEG-1 format; the EyeTV 200 records in the higher-quality MPEG-2 format, the encoding format used for DVDs and satellite TV. Formac's (www.formac.com) $299 Studio TVR (formerly called the Studio DV/TV; ●●●●; April 2003) connects via FireWire and records in DV format.

But these devices work only with standard cable and over-the-air broadcasts. None of these products can control a digital-cable or satellite-TV box—you'll need to change the channel manually on your box for your Mac to see what you want to watch or record.

Burn Your Shows Once you've recorded a program with any of these products, burning it to DVD or Video CD is relatively easy. You can edit the shows you record with your digital-video recorder's included software, QuickTime, or iMovie, and then archive them with Roxio's $100 Toast 6 Titanium (●●●●½; December 2003) or Apple's iDVD.

From Mac to TV You can also use your TV to display content that lives on your Mac. TiVo (www.tivo.com) offers TiVo Desktop as part of its now-free Home Media Option for stand-alone TiVo Series2 boxes. TiVo Desktop lets you display digital photos and play back music from your Mac. Elgato's $249 EyeHome (●●●; July 2004) does TiVo one better—it's a stand-alone box that connects to your TV and plays back music, photos, and movies from your Mac. And Roku Labs' $299 HD1000 Digital Media Player (www.rokulabs.com) connects to high-definition TVs and lets you view pictures and play back music and video.—JASON SNELL

GAME IN TRUE 3-D

YOU'VE PROBABLY BEEN PLAYING 3-D games for years, but have you ever really played them in 3-D? Pangea Software's $35 Nanosaur 2: Hatchling (●●●●; June 2004; www.pangeasoft.net) lets you do exactly that. Its stereographic 3-D support brings action gaming to a whole different dimension—quite literally. Pangea includes two pairs of red-and-cyan anaglyph glasses (like the cardboard things you get at 3-D movies). These glasses are all right, but if you're a real gaming freak with $1,000 to spare (and you have a CRT monitor), you can graduate to the CrystalEyes Workstation (www.stereographics.com). These LCD shutter glasses are made by StereoGraphics and are actually intended for engineers and scientists. No matter which pair of glasses your budget can afford, we'll help you get the most out of your investment.

To use either pair of glasses, fire up Nanosaur 2 and click on the B&W button, under the Anaglyph Settings option. This is very important when you use the red-and-cyan glasses, since the color offset that creates the 3-D effect combined with the game's own rich color palette can cause quite a headache. Your experience with the red-and-cyan glasses may improve if you go to the Displays preference pane and tweak brightness, contrast, and color settings to adjust the 3-D effect.

Setting up the LCD shutter glasses is a bit more elaborate. The included transmitter box must be in plain sight of your goggles, which are wireless and powered by a pair of batteries. The transmitter has a seven-foot in-line attachment that runs between your Mac and monitor, and another connector that plugs into a power supply. Because of the way this technology works, you have to use a CRT-based display with a high refresh rate (100Hz or higher is recommended).

Presuming your configuration makes the cut, you're in for a treat: full-color graphics and an absolutely astonishing 3-D effect. It's not quite a "jump off the screen" effect—instead, it's more like a shadow-box effect, where the edge of your screen frames the moving, fully realized 3-D characters within.

PETER BELANGER

If you can't justify the cost of the CrystalEyes, you can at least use the red-and-cyan glasses with Apple Cinema HD Displays and flat-panel iMacs.—PETER COHEN

TURN YOUR MAC INTO A PICTURE FRAME

HARD

What You'll Need:
Shadow-box frame
Glue gun
Mat board
Hand drill or drill press
Small Phillips screwdriver
#6 and #8 Torx screwdrivers
Needle-nose pliers

DO YOU EVER GET TIRED of looking at the same framed photos every day? If you have an old laptop—perhaps one with a broken CD drive or one that's too slow to run the latest processor-heavy applications—you can put it to use around your house as a digital picture frame. You'll get a rotating display of your favorite digital photos, which will be a conversation piece for visitors, but you'll still have a fully functional Mac should you need one in a pinch.

The idea is simple: you strip down an old laptop to its bare essentials, glue the pieces into a frame that fits your home decor, and then activate a screen saver that rotates through a collection of photos. I used a beat-up 14-inch iBook, but any older PowerBook or iBook running OS 9 or OS X will do.

First a word of caution: Although the process of turning your Mac into a framed photo is relatively straightforward, it's not for the faint of heart. It requires that you completely dismantle your laptop—that means removing dozens of screws, prying apart the case, and detaching and reattaching wires from the logic board. If you're not willing to lose your laptop forever should something go wrong, think twice before attempting this project.

Set Up the Software Before you crack open your laptop, load the photos you want to use onto the computer, set up screen-saver software (either OS X's built-in screen saver or Ambrosia Software's $15 Eclipse for OS 9 [www.ambrosiasoftware.com]), and adjust your Energy Saver preferences so the computer won't put itself to sleep. When you're done, shut down the computer, unplug the power supply, and take out the battery.

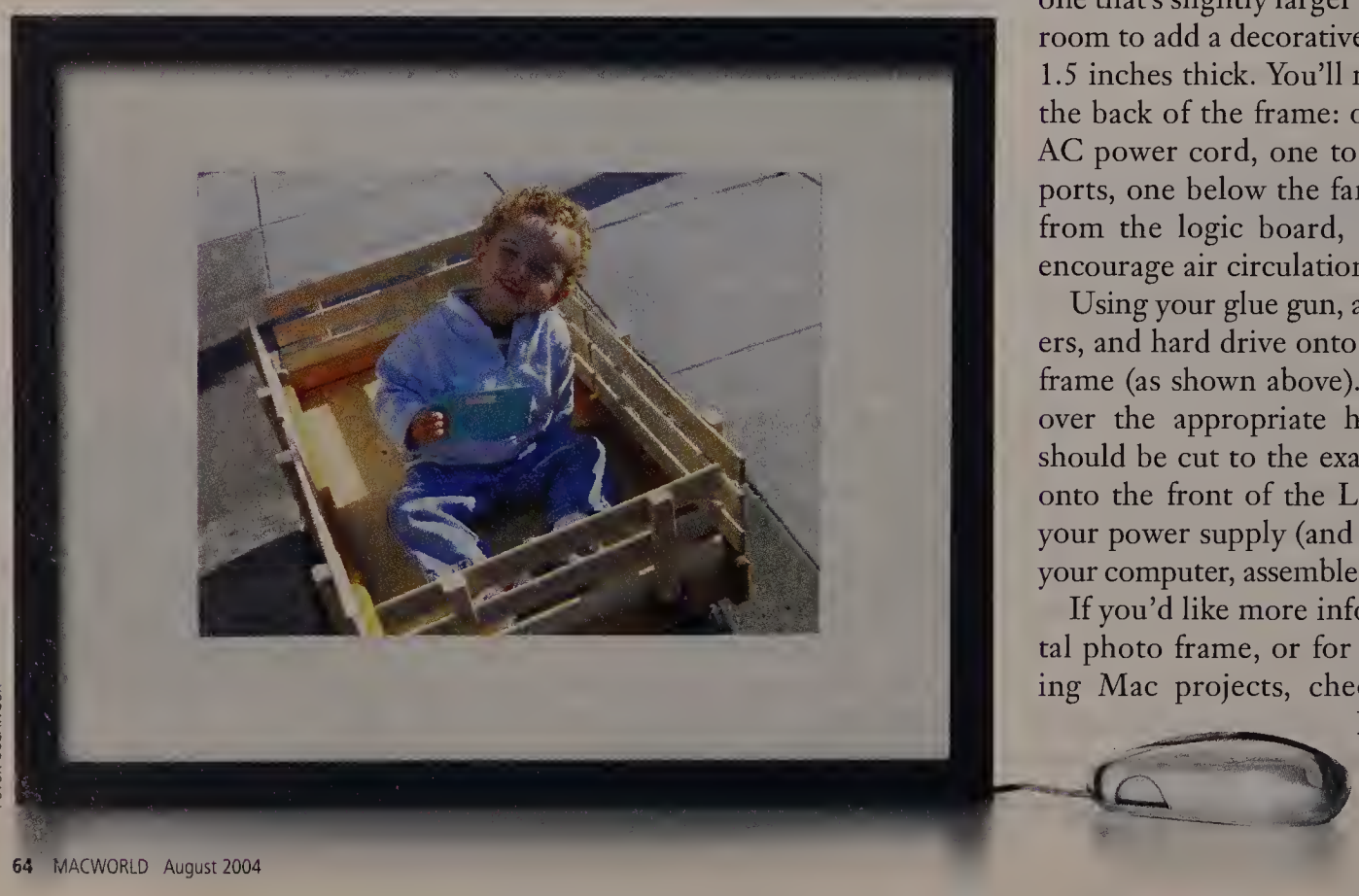
Take Apart Your Mac Dismantling your laptop is the hardest part of the conversion process. Make sure you have a large, level space to work on. From the bottom of the laptop, remove everything but the logic board (including all attached wires and circuits), the hard drive, the fan, and the speakers.

You'll also need to remove the LCD screen from the top of the laptop. Be sure to unthread any cables from the metal hinge and surrounding brackets before removing them. There are step-by-step dismantling instructions for PowerBook G3s and 400MHz PowerBook G4s at find.macworld.com/0016. For the Titanium PowerBook or a newer iBook, I highly recommend the $10 Take Apart Repair manuals, which you can download at www.powerbookmedic.com.

Assemble the Picture Frame Once you've fully dismantled the laptop, you're ready to assemble your picture frame. For this project, you'll need an extra-thick picture frame called a shadow box. Look for one that's slightly larger than your screen—so there's room to add a decorative mat around it—and at least 1.5 inches thick. You'll need to drill several holes in the back of the frame: one to provide access to the AC power cord, one to provide access to the USB ports, one below the fan to help blow hot air away from the logic board, and at least two others to encourage air circulation.

Using your glue gun, attach the logic board, speakers, and hard drive onto the inside back panel of the frame (as shown above). Be sure to position the fan over the appropriate hole. Glue the mat—which should be cut to the exact size of the shadow box—onto the front of the LCD screen. Finally, plug in your power supply (and a mouse if desired), turn on your computer, assemble the picture frame, and enjoy.

If you'd like more information on creating a digital photo frame, or for more about other interesting Mac projects, check out *Mac Toys*, by John Rizzo and Scott Knaster (John Wiley & Sons, 2004).—KELLY LUNSFORD



PETER BELANGER

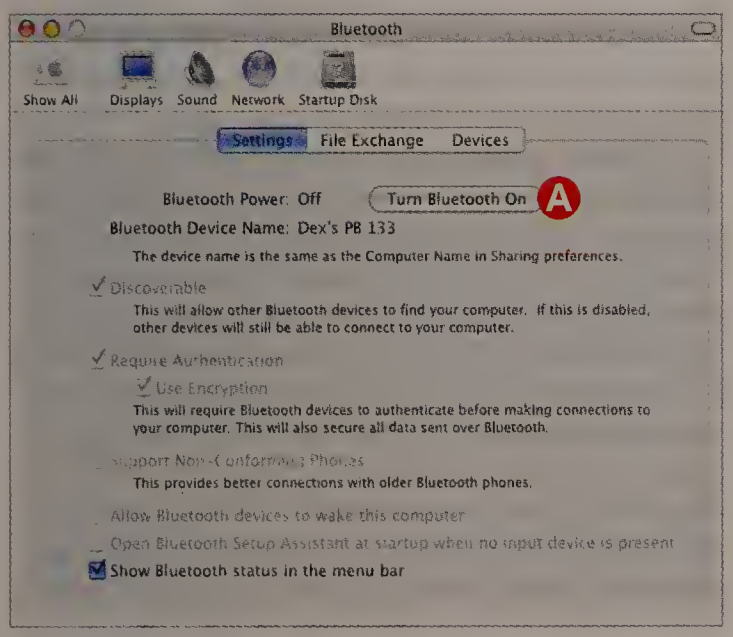
NETWORK WITH BLUETOOTH

IT SEEMS AS THOUGH EVERY PART of the digital hub has its own unique connector. But you can leave the cables behind and use a wireless technology that Apple is integrating into all of its computers: Bluetooth.

Bluetooth lets you synchronize digital devices within a 30-foot range. You can use it to transfer files among computers, connect wireless headsets, communicate with PDAs and printers, and set your mouse free so it can scamper unfettered about your desktop.

Bluetooth software is built into Panther (and can be used with Macs running Jaguar). It becomes functional as soon as your system spots a compatible module. Bluetooth is built into current 12-, 15-, and 17-inch PowerBooks and is an option for most other new Macs. If your Mac doesn't include Bluetooth, plug in an adapter, such as the $40 D-Link DBT-120 USB Adapter (www.dlink.com), and join the fun.

Once your hardware and software is in place, go to System Preferences and click on Bluetooth, under Hardware. Enable networking by clicking on the Turn Bluetooth On button under Settings Ⓐ. Select the Discoverable, Require Authentication, Use Encryption, and Show Bluetooth Status In The Menu Bar options. These settings make your Mac visible to other Bluetooth devices while providing you with a measure of security.



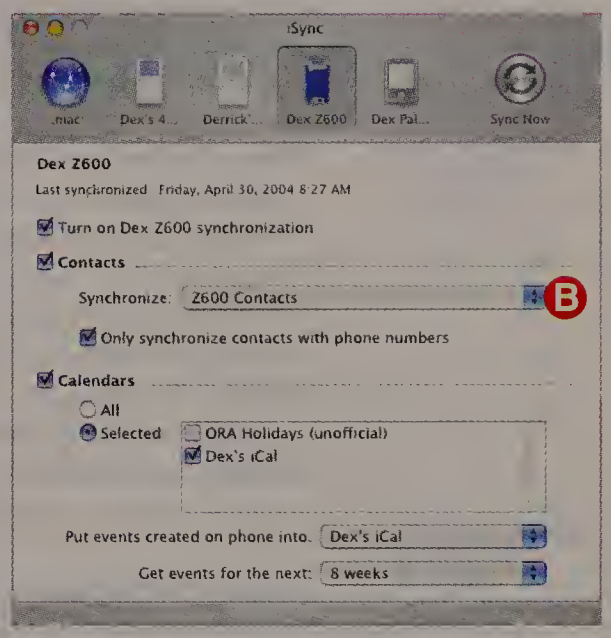
Establish Communication It's time to connect to something. I'll use the Sony Ericsson Z600 GSM smart phone. (Some phones are considered "smart" because they include capabilities such as personal information managers and Bluetooth connectivity.) Apple lists all compatible smart phones at www.apple.com/isync/devices.html.

To begin the communication process, you have to introduce your Mac to your device. This is called *pairing*. You can pair manually in the Bluetooth preference pane by clicking on the Devices tab and then on the Pair New Device button. But I recommend the Bluetooth Setup Assistant, which is available via the Set Up New Device button at the bottom of the Devices pane. The Assistant walks you through the entire pairing process. Just remember to enable Bluetooth on your digital device so it can communicate with your Mac.

Get in Sync Now that your Mac and smart phone are trusted friends, you can start exchanging data. Open iSync and click on your phone's icon to reveal its settings pane.

Select the Turn On Synchronization, Contacts, and Calendars options. Under Contacts, you can sync either your entire Address Book or just one of the groups within its database. I recommend that you set up a specific group for your phone, so you add only the data you need in your pocket Ⓑ.

The same goes for iCal. You can choose a specific calendar instead of syncing all of them. Many phones also capture your To Do list.



For your first synchronization, you need to turn off synchronization for everything (including .Mac) except your phone. Deselect the Turn On Synchronization option for each device in iSync. Click on the Sync Now button, and all of your data will flow from your Mac to your phone. If the first attempt is unsuccessful, enable one other device to iSync and try again. Now your contact and calendar data can be with you at all times.

Address Book Tricks Once you've uploaded your Address Book contacts to your phone, you can deselect Turn On Address Book Synchronization in iSync. Address Book lets you send single vCards directly to your device—much speedier than a full sync.

To send a vCard to your phone, launch Address Book and click on the Bluetooth button in the upper left corner of the Address Book window. Select the entry you want to send, go to Card: Send This Card, and choose your smart phone from the menu. Address Book will send the new entry to your phone.

Your Mac and phone can be even closer. Click on any of the gray description labels within your contact record (such as Mobile), and Address Book dials the number for you. You can even send an SMS text message directly from your Mac.

Stay Secure Although your Mac uses authentication and encryption for transferring data to your smart phone, your phone probably isn't as secure. So you may want to turn off Bluetooth while in public, which is usually easily done via a top-level menu option.

Just the Beginning You can take Bluetooth much further. For example, what better way to transfer pictures from your camera phone to your Mac than by clicking on the phone's Send button and having the image magically appear on your Mac's desktop? That's the simple power of Bluetooth.—DERRICK STORY

BUILD YOUR OWN MUSIC SERVER

MEDIUM

What You'll Need:
Second internal hard drive
PCI host adapter card (optional)
Phillips screwdriver
Ethernet network
Apple's iTunes

YOUR FAMILY MEMBERS were happy when you networked all the Macs in the house. Now they want to join their music into one large iTunes library that everyone can access and add to.

Building a music server isn't difficult or expensive. We'll show you how to install a larger hard drive in your server Mac (we used a Power Mac G4), move music to it, and share the library.

Step 1: Buy a Second Hard Drive

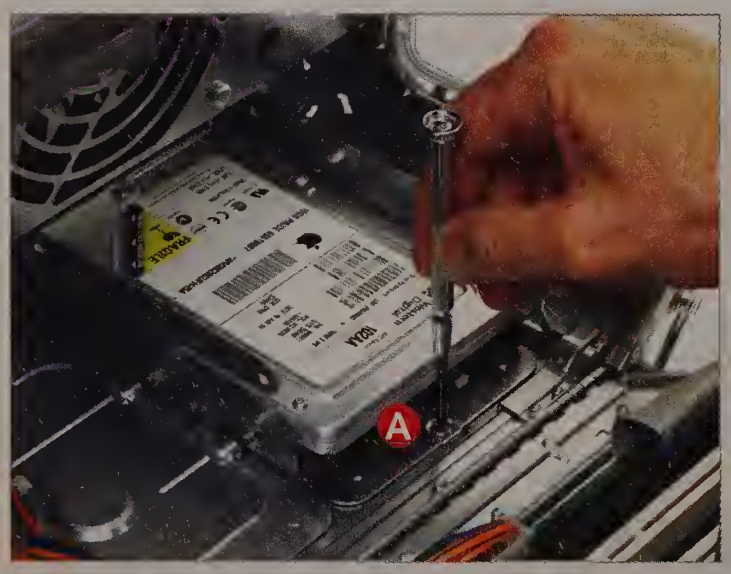
The cheapest way to add lots of storage to your G4 is to buy a second internal 3.5-inch IDE drive. Choose one with 7,200 rpm and 8MB of cache. Western Digital, Maxtor, and Hitachi all make drives that meet these specifications. If you have a pre–mirrored-drive-door G4 and you want a second drive that's larger than 128GB, you'll also have to add a PCI host adapter card, such as Sonnet's $100 Tempo ATA133 (www.sonnettech.com).

Step 2: Prepare to Install the Drive

Turn off and unplug your Mac. Place it on a flat, clean surface and open the access door. Touch a metal surface in the computer to discharge static electricity. Disconnect the power and IDE cables from the hard drive. Using a Phillips screwdriver, remove the single screw that holds the drive bracket in place Ⓐ. Pull the bracket containing your drive up and out of the Mac.

Step 3: Set the Drive Jumpers

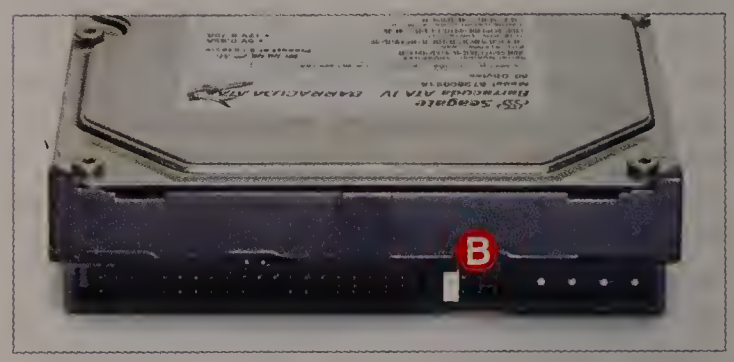
Check the label on the bottom or the edge of your existing hard drive. If you have a Western Digital or Quantum drive, set its jumpers to Master. Other drive brands should be set correctly by default. To reset the jumper, slide it to the Master position. Your new drive's jumper should already be in the slave position, but confirm that by checking the drive's instructions and then verifying that the jumpers on your second drive are in the correct positions for slave operation Ⓑ.



Step 4: Connect the New Drive

Slide the new drive on top of the old one in the bracket, so that the right side of the drive aligns with the bracket, and fasten the drive to the bracket.

When the drive is in place, screw the left side to the bracket. Now you're ready to return the drive



bracket to the Mac. Connect the power cable to your lower drive, and screw the bracket back into place. Plug the IDE cable into the lower drive, and then plug the available ribbon connector to the new drive. Make sure the connectors fit snugly. Close and reconnect your Mac.

Step 5: Format and Prepare the New Drive

Start up your Mac and open Applications: Utilities: Disk Utility. Your new, unformatted drive should appear in the left pane. If it doesn't, shut down the Mac and make sure that the jumpers are set correctly, and that all cables are tightly and completely connected.

In Disk Utility, click on the new drive and then on the Erase tab. Leave Mac OS X Extended selected. Click on Erase. Then click on Erase again.

To allow access to your music library, the new drive's files must be available to everyone who will be importing music, or copying it from the library. You need to override the permissions that normally prevent multiple users of the same Mac from modifying the same files. Select the drive and press ⌘-I. Click on Ownership & Permissions and then select the Ignore Ownership On This Volume option.

Step 6: Copy Your Music

If your library is stored on this Mac's startup disk, open Users: *user name*: Music: iTunes, where *user name* is your user name. Copy the iTunes Music folder to the new drive. If you store your music library elsewhere, connect to that Mac over a network and then copy the library to the music server Mac.

Open iTunes and choose iTunes: Preferences. Click on the Advanced icon. Click on Change and go to the iTunes Music folder on the new hard drive. Select the Copy Files To iTunes Music Folder When Adding To Library option, and then close Preferences. iTunes will ask if you want to move and rename files in the new library. Click on No. Quit iTunes. Copy the iTunes 4 Music Library file from your iTunes folder to Users: Shared. Make an alias of the file, and copy it to *user name*: Music: iTunes. Delete the original iTunes 4 Music Library file, and delete *alias* from the alias file name.

STEP-BY-STEP PHOTOS BY PETER BELANGER

To give another user of this Mac access to the library, log in as a different user. Launch iTunes and change the library location to your new hard drive. Quit iTunes. Make an alias of the iTunes 4 Music Library file in the Shared folder, and replace this user's own music library file with the alias (remember to delete *alias* from the file name). Open iTunes. This user now has access to your shared library and can add files or playlists to it. If iTunes tells you that the user doesn't have sufficient privileges to open the library file, log in as yourself, select the shared library, press ⌘-I, and change Ownership & Permissions for Others to Read & Write.

Step 7: Play Shared Music

To give everyone access to the music server from their own Macs, open iTunes: Preferences on the server Mac. Click on the Sharing tab and select either your library or individual playlists to share. By selecting the Look For Shared Music option in their own copies of iTunes, your whole family can play the music you've shared.—SHELLY BRISBIN

STORE MORE

MEDIUM

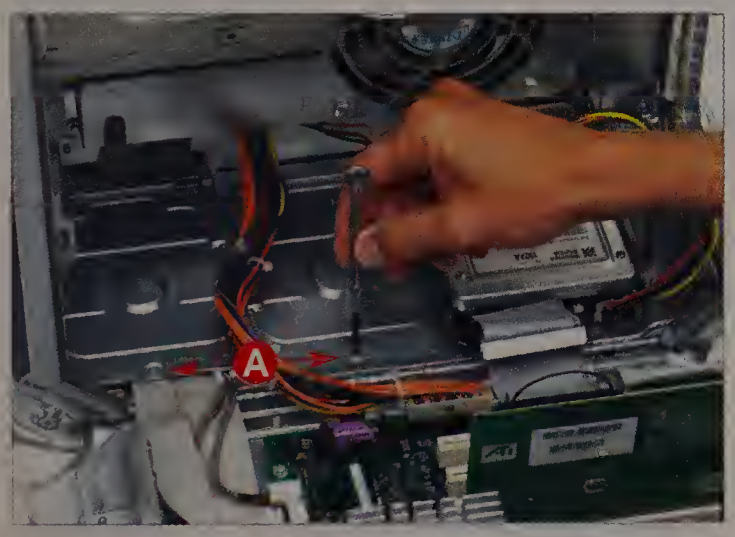
What You'll Need:
PCI ATA/133 RAID controller card
Two ATA drives of the same size
Magnetized Phillips screwdriver
Hard-drive power splitter

WHEN YOU WORK with a lot of large files, such as video or audio, you run out of hard-drive space. You also need fast hard-drive access. Make your life easier with a fast hardware RAID drive set. You can add one to a pre–mirrored-drive-door Power Mac G4 in less than ten minutes.

You'll need a PCI ATA/133 RAID controller card (from SIIG, Acard, or Sonnet) and two ATA drives of the same size (some cards let you join four equal-size drives into a RAID). Most PCI ATA/133 cards support drives as large as 250GB each.

While you can format two drives as one RAID in OS X's Disk Utility, a hardware RAID gives you a faster set of drives. All hardware RAID cards offer RAID 0, also called *striping*, which splits the data flow to both drives, making the RAID almost twice as fast as a single drive. Some cards also have RAID 1, called *mirroring*, which duplicates your data on both drives. You get no speed improvement, but your data is immediately backed up.

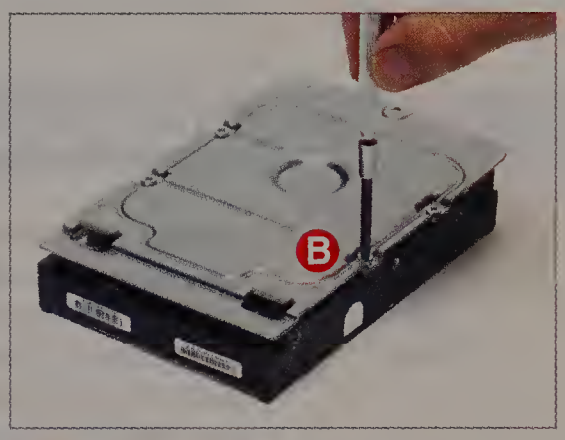
To install the card and drives in your Power Mac, you'll need a magnetized Phillips screwdriver and a hard-drive power splitter (available at Radio Shack).



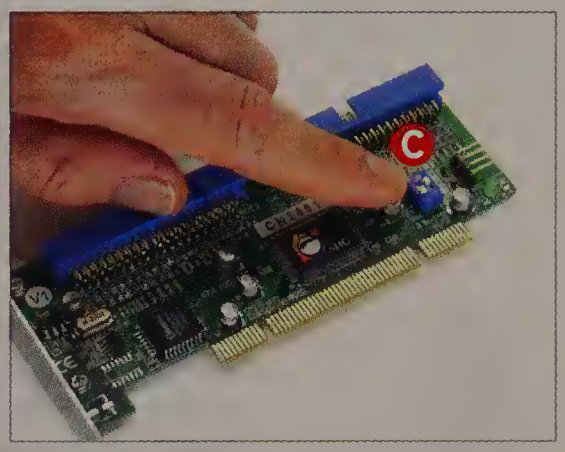
Before you unplug your computer, touch the metal on your computer's PCI slots to discharge static electricity. Then unplug the computer and open the side door.

On the bottom of the enclosure, you'll see your computer's internal drive. To the left of the boot drive, you'll see two drive carrier sleds screwed to the carriage. Unscrew these sleds Ⓐ and lift them out.

Take your hard drives and set both of their jumpers to Master. Then screw the hard drives to the drive sleds Ⓑ. Once attached, return the drive sleds to their respective slots and secure each with a screw.



The PCI ATA controller card has DIP switches on the circuit board to turn the RAID function on or off. Set it to On (the picture shows the setting for a SIIG card) Ⓒ.



Some cards have settings for RAID 0 and RAID 1. Once you've set the DIP switches, plug the card into one of your available PCI ports and secure it with the small slot screw.

Attach two ATA cables to the card. Run the cables to each drive. Attach the drive at the Master position (the end of the ribbon). Lightly fold the ribbon so it bends into a 90-degree angle about one inch from the PCI card connection—this way, the ATA ribbons won't block the airflow to the computer's main fan.

You'll find an open power connection hanging in the center of the computer. Use the power splitter to send power to both drives.

Close the Power Mac case carefully. Plug in the power and start up the computer. Open Disk Utility. Format the new drive set and assign it a new name. Your RAID is now ready to store files.—ANTON LINECKER

EASY

ACCESSORIZE YOUR iSIGHT

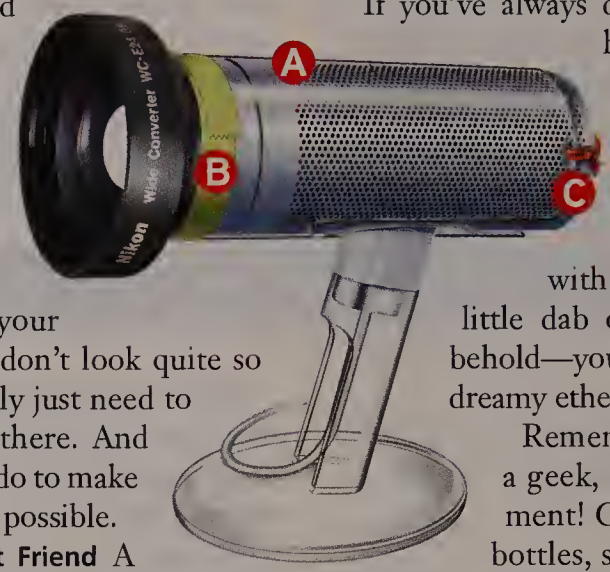
The original and complete version of this article is from O'Reilly's Mac DevCenter, and is available at find.macworld.com/0027.

WITH THE ADVENT of broadband Internet, cameras such as Apple's iSight, and programs such as Apple's iChat AV, that Holy Grail of science fiction, the videoconference, has arrived on your desktop.

So you bought an iSight, set up your camera, downloaded iChat AV, and opened a chat. Then came the shock. Yikes! Do I really look like the Creature from the Black Lagoon?

Relax, and get some air into your gills, because chances are you don't look quite so frightening as that. You probably just need to do a little tweaking here and there. And there are several things you can do to make your virtual self look as good as possible.

Accessories Are a Geek's Best Friend A wide-angle lens is a useful accessory to an iSight. A wide-angle is handy for including another person, displaying more of your workspace or an entire meeting room, and surveilling a room. A bonus effect of such a lens is that it tends to make people look a little thinner. We often use a Nikon WC-E24 wide-angle lens (www.nikon-image.com) so we can both fit into the field of view. Using a small plastic bottle Ⓐ, a little tape Ⓑ, and a rubber band Ⓒ, we fashioned a handy lens holder (see "Stop Laughing! It Works!").



Stop Laughing! It Works! This no-cost hack lets you use existing wide-angle lenses with your iSight.

If you've always dreamed of being a dreamboat, here's your chance to bask in a flattering romantic glow. Create a soft filter by stretching a piece of very fine gauze or panty hose over the lens. Or fit some clear plastic wrap tightly over the lens with a rubber band and then apply a little dab of Vaseline. Wipe it a bit and behold—you'll find yourself in a soft and dreamy ethereal experience.

Remember, first and foremost you are a geek, and geeks were born to experiment! Convex and concave lenses, beer bottles, shot glasses, bubble wrap, candy wrappers—all can be placed in front of your Web cam. You never know what cool effect you'll discover, or what warranty you can expire early.—NITROZAC AND SNAGGY

ILLUSTRATION BY TERRY PACZKO

EASY

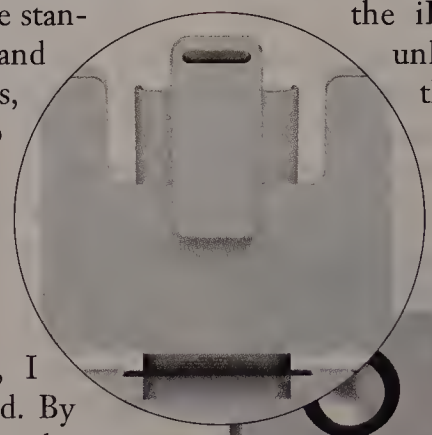
THE VERSATILE iPOD MINI BELT CLIP

ANYONE WHO'S WATCHED the late-eighties and early-nineties TV show *MacGyver* will remember that there was nothing Richard Dean Anderson's character couldn't do with a roll of duct tape. Similarly, I've discovered that the plastic belt clip that comes with the iPod mini can be equally versatile, adding functionality to the colorful mini and making it compatible with some products that officially require the standard iPod's dock connector. The iPod and the iPod mini have the same connectors, but the iPod is deeper than the mini. So products designed specifically for the standard iPod are too deep to properly seat the iPod mini. But you can use the belt clip to make your iPod mini a jack-of-all-trades.

> When I bought my iPod mini, I already had a dock for the larger iPod. By attaching the mini's belt clip upside down—positioned about a millimeter below the top of the mini—it supports the mini nicely in the standard iPod dock (left).

> One of my favorite accessories for the standard iPod is Altec Lansing's inMotion portable speaker system (♦♦♦♦; April 2004). To get it to work with the mini, this time place the belt clip right side up and clip it onto the inMotion (right). (Shortly before we went to press, Altec Lansing announced a $3 rubber adapter that allows you to use the mini with the inMotion system. If you're interested, you can find out more at www.altec-lansing.com.)

> Because of the iPod mini's small size, accessory vendors are starting to sell "wearable" cases—ones that let you connect a strap to the case and wear the iPod mini around your neck. But unless you want the added protection that such a case brings, you can get the same result for free simply by attaching a lanyard or other strap to the slot at the top of the belt clip itself.—DAN FRAKES



PETER BELANGER

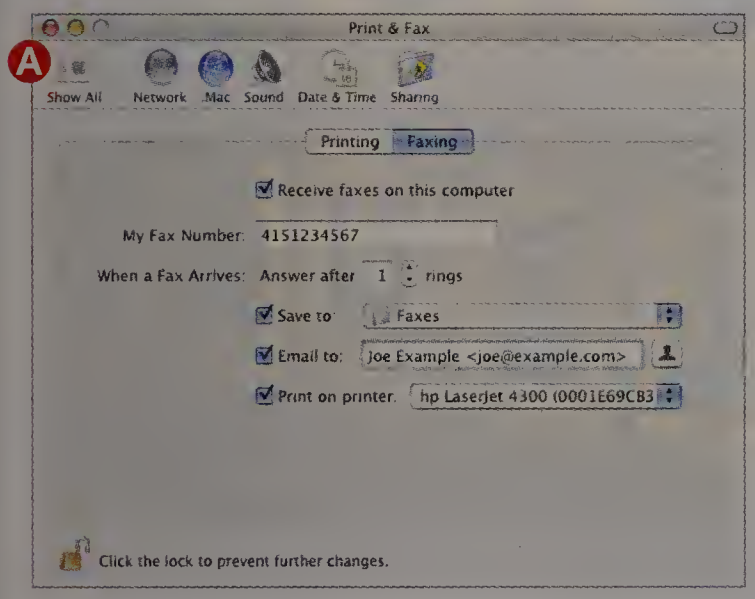
FAX FROM YOUR MAC

WHY USE YOUR BULKY, outdated, and probably cranky fax machine to send faxes? You can fax directly from your Mac with just a few tools: a scanner, a modem, a phone line, and the faxing capability built into Panther (OS X 10.3). This feature is limited, but once you work around its little issues, it comes in handy.

Setup

To use your Mac as a fax machine, you'll need an internal or external modem. Because faxing over IP is not yet feasible, you must use a standard phone line. You'll also need a scanner that's compatible with your Mac running Panther.

Open System Preferences and enable your modem in the Network preference pane. Click on Apply Now. Go to the Print & Fax preference pane A, also in System Preferences, and under the Faxing tab, select the Receive Faxes On This Computer option. Fill in the necessary information, and set options for what your Mac will do when you receive a fax: save the fax to a certain folder, send an e-mail alerting you to the fax, or print the fax.



You may want to turn up the sound on your Mac so you can hear the modem sounds as you send faxes (the modem doesn't make sound while receiving a fax).

Finally and obviously, make sure your phone line is plugged into your Mac and your phone jack, even if you usually use that phone line for DSL.

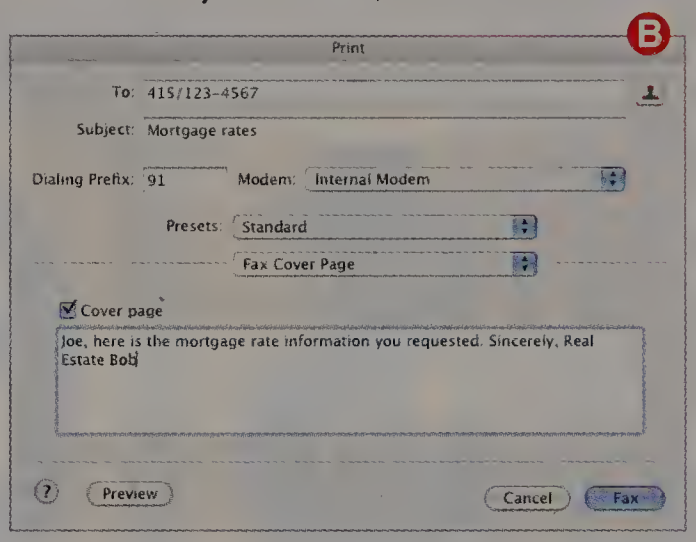
Send Faxes

Let's say you want to fax your clients a paper sketch that you drew while talking to them on the phone minutes ago. First, make it digital. Scan the document using your scanner's included software, Adobe Photoshop or Photoshop Elements, or Hamrick Software's VueScan. Note that Apple's ImageCapture supports only Epson scanners. For the best-quality fax, scan in black and white, and at no higher than 200 dpi (the highest resolution of many fax machines). If your scanner software supports it, save the scanned file in PDF.

Open the scanned PDF file in Preview (in the Applications folder). Then go to File: Print and click on the Fax button at the bottom of the dialog box. In the dialog box that appears B, enter the destination fax number in the To field, or click on the person icon next to the To field to get the number from Address Book. (Panther won't pull fax numbers from any other contact manager.)

Be careful not to press the return key while you're typing in this field—the fax will send if you do. Now, click on the Fax button.

Panther won't tell you when your fax has been sent, but in ten seconds or so, a new item, called Internal Modem, will appear in your Dock. This item shows you the fax's status. You should also hear the modem's characteristic sound.



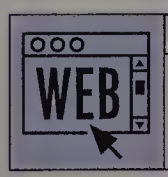
Receive Faxes

To receive faxes while you're away from your Mac, go to the Energy Saver preference pane and make sure it's set to never go to sleep. However, you must keep your phone line connected to your Mac.

The bad news is that when you receive a fax, Panther's fax feature won't bring up an alert, nor will you hear your modem receive the fax. Panther only puts the fax in whatever folder you selected upon setup. If you've set it to print the fax automatically or send you an e-mail, that's all the alert you'll get. But there is a workaround. Just go to the Finder, locate the folder where you store faxes, control-click on it, and choose Enable Folder Actions. Control-click on it again, and select Attach A Folder Action. In the resulting window, choose Add – New Item Alert.scpt. (For more tips on faxing in Panther, see "Panther Secrets Declassified," find.macworld.com/0023.)

You've Got Choices

If you want more from Panther's built-in faxing feature, SmileOnMyMac's $30 Page Sender 3.2 organizes your faxes in an interface resembling Apple's Mail, lets you run an AppleScript in response to an incoming fax, and offers many other nifty preferences. And if you're having problems with Panther sending you e-mail when you receive a fax, try Real World Technology Solutions' free FaxEmailHelper 1.2 (★★★★; *Mac Gems*, June 2004; www.rwts.com.au/FaxEmailHelper).—JENNIFER BERGER



GO TO WEB:

We've got loads more hardware how-tos on our Web site. Go to find.macworld.com/0021 for links to all of our past coverage.

MACWORLD'S $6000 CHALLENGE

SAVVY MAC SHOPPERS SQUARE OFF TO OUTFIT THE PERFECT HOME OFFICE

EVERY SERIOUS MAC USER IMAGINES IT AT SOME point—the perfect Mac setup. Visions of a workspace equipped with the most powerful hardware and most elegant software available dance through our heads: a dual-processor G5, maybe two; a printer cranking out flawless documents created with blazing-fast applications. And all of it at our fingertips, of course, since money is no object in this dreamworld.

Unfortunately, for most of us, money *is* an object. So until that winning Powerball ticket comes through or we get that call from the executor of our rich, long-lost Uncle Moneybags' estate, we're going to have to keep an eye trained on the bottom line.

But just because we have to keep to a budget, does that mean we must keep our dreams of the ultimate Mac workspace at arm's length? With a little prioritizing and some creative shopping, can Mac users equip themselves with the tools to work productively and in style without having to relocate to the poorhouse? To find out, we tapped *Macworld* Contributing Editors Adam C. Engst and Christopher Breen, gave them a budget, and told them to build a home office with a Mac as its centerpiece.

THE SCENARIO We asked Adam and Christopher to create a home office for a freelance technical writer and editor with a number of clients working on different platforms. But before we unleashed the duo upon the retail world, we added another twist. We told Adam to shop as if he were a bargain-hunting do-it-yourselfer, willing to buy products from smaller companies. And we asked Christopher to make his selections as if he were a hassle-loathing Mac user who wanted to buy everything, install it once, and never have to tinker with it again.

THE BUDGET Both shoppers could start with a budget of $5,000 and a 15-inch flat-panel iMac with an 800MHz G4 processor and Mac OS X 10.2 installed. Or they could sell off the iMac for $1,000—the lower end of the current estimated price range for such a system, according to EveryMac.com—and add the extra money to the budget (which didn't include shipping costs, taxes, and other incidental charges). We told our participants to focus only on hardware and software—we excluded office supplies, Internet service provider fees, and that Aeron chair Adam really wanted to expense.

Now let's see if our savvy Mac shoppers maximized their offices without maxing out their credit cards. >>

#1

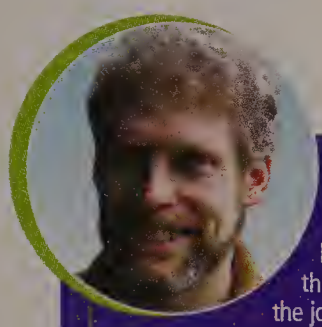
Room with a View Hunting for bargain prices on things like a used dual-processor Power Mac G4 lets you spend money on items that really matter—like two flat-panel monitors.

THE BARGAIN HUNTER:
A Penny Saved Is a Pixel Earned

BY ADAM C. ENGST

Heading into this, my biggest concern was whether I'd be able to ditch the iMac in favor of a Mac that could handle double monitors. Without that extra $1,000, it would've been tricky to get everything I wanted. If I had to rely on an iMac, I would at least want the 20-inch model.

So why do I need double monitors? Because whoever dies with the most pixels wins. Seriously, I haven't used a single-monitor Mac as my primary desktop machine since 1991, when I first put a video card in my SE/30, and I wouldn't have it any other way. The productivity enhancement is too great to ignore—studies show that larger monitors are worth the extra money, and that two smaller monitors are worth even more than one large monitor. Why? The more pixels you have, the more you can see at once—and the more you can see at once, the more productive you are. That's fact, not belief.



ADAM C. ENGST

My Strategy: Pick highly effective tools that I knew would do the job for a reasonable price—like a used dual-processor G4, which offers enough CPU power for what my user needs to do, without breaking the bank.

Most Essential Purchases: The Power Mac, at least one monitor, the backup system with Retrospect, and Office.

Most Expendable Purchase: Circus Ponies NoteBook 1.2, since I could cobble together its capabilities to some degree with a combination of Microsoft Word, AppleWorks, and shareware or freeware. I could also drop Eudora's Paid mode for the free Sponsored mode (it has ads and doesn't offer personal tech support).

If I Had More Money, I'd: Buy Adobe Acrobat Professional for swapping files back and forth with editors, Adobe InDesign CS for larger layout projects, Michael Tsai's SpamSieve to bolster Eudora's spam checking, a Palm handheld, and a fax machine.

Breen's Reaction: *Damn, that Engst is a smart shopper. Other than his expert digging for great prices, the big head smacker for me was Snapz Pro X—absolutely essential for this kind of work. I can't believe I left it out.*

DECISIONS, DECISIONS If I'd had a bigger budget, I would have bought a dual-processor G5—not for the processing power, but for the longevity. I also had to decide between Fetch Softworks' Fetch and Stairways Software's Interarchy; I flipped a coin.

I added 512MB to my Power Mac because you really need at least that much for OS X, and the more memory, the better. RAM is a little trickier than other commodity items, since you need to buy it from a reputable vendor that doesn't cut corners. I went to dealram (www.dealram.com) and compared prices, then I picked Data Memory System since its price was nearly the cheapest and I've done well with that vendor in the past.

I thought adding a laptop—in my case, a 12-inch 800MHz iBook—was essential. With just a desktop, you're completely useless away from your office. If I

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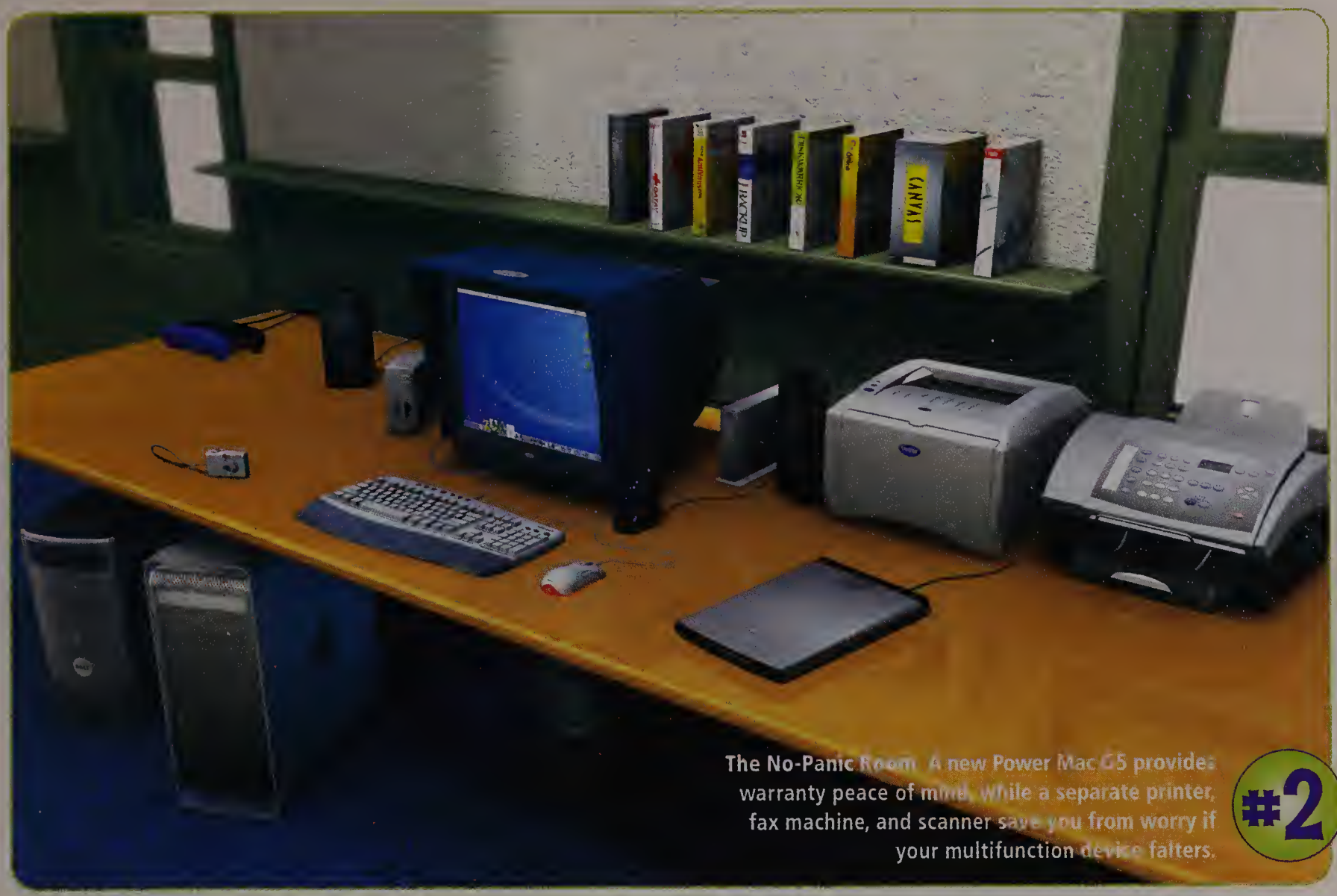

The No-Panic Room. A new Power Mac G5 provides warranty peace of mind, while a separate printer, fax machine, and scanner save you from worry if your multifunction device falters.

#2

THE HASSLE-FREE USER:
Keep Shopping Simple

BY CHRISTOPHER BREEN

To buy hardware or software—that is the question. For me, anyhow. Deciding which area to focus on was the toughest part about putting together a Mac-based office. In the end, I made sure to equip my theoretical user with reliable hardware and provide enough software to get the job done. I thought my user would be far more interested in working than messing with their setup. For that reason, I really wanted to make this a no-fuss, no-muss exercise, in which the user would easily get the essential gear and spend as little time as possible maintaining it.

Reliability was one of the reasons I traded in the iMac for the Power Mac G5. My busy user wouldn't have time to mess around with out-of-warranty equipment. A new G5 offers the option to call Apple for help and the safety net of a one-year warranty.

WINDOWS WORLD? Strange as this may sound—especially in the pages of *Macworld*—I consider the PC I bought in addition to the Power Mac essential for a user working in a multiplatform environment. Emulation is slow and you can run into compatibility issues. As much as I love the Mac, when you need to do Windows, get a Windows box. Having separate computers allows each system to devote its entire attention to the task at hand. With the help of a KVM switch, my user could use the same keyboard, mouse, and monitor for both computers. That's partly to keep down on clutter and partly because buying separate peripherals for each device seems redundant.

Of course, my Windows box also needed some software—Microsoft Office and antivirus software. Windows viruses are omnipresent. I would no more run Windows without virus protection than I would weld naked. Mac viruses, on the other hand, are virtually

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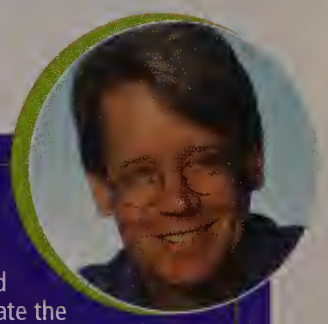


CHRISTOPHER BREEN

My Strategy: To put myself in the shoes of this no-fuss, no-muss user who didn't have a lot of time or interest in rummaging around the Web to find the cheapest price. A low price at a reputable source was good enough. And because reliability is a big concern, I chose new, uncomplicated products that came with warranties.

Most Essential Purchases: The Windows PC. Although you can open and create PC-compatible documents with Office and Canvas, install Linux on a Mac, or use emulation software to work in Windows, there are times when you need the real thing for optimal compatibility and performance.

Most Expendable Purchase: Toast. Between the Mac and the PC, I could generate the discs I need.

If I Had More Money, I'd: Include a good photo printer and a copy of Adobe Photoshop or Photoshop Elements.

Engst's Reaction: *I never even thought of getting a PC; in the real world, I turn mine on only a few times a year. I considered a laser printer, but I figured an inkjet would be necessary for large jobs like book layouts. For me, the head-slapping omission was Disk Warrior; I should have added that to my list.*

ILLUSTRATIONS BY JOHN KOCON

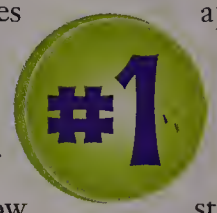
THE BARGAIN HUNTER, continued

PRODUCT	PRICE
12-inch 800MHz iBook G4	$979
512MB RAM for Power Mac	$106
512MB RAM for iBook	$116
AirPort Extreme card	$99
BBEdit 7.1.4	$179
Creature II speakers	$68
DI-524 802.11g cable-DSL router	$5
Dual-1.25GHz Power Mac G4	$1,149
Eudora 6.1	$49
Fetch 4.0.3	$25
FireVue FireWire 400 Hot-Swap Bay	$179
GraphicConverter 5.1	$30
i860 Desktop Photo Printer	$117
iKey 1.0.7	$20
LaunchBar 3.3	$39
Microsoft Office 2004 for Mac Standard Edition	$369
NoteBook 1.2	$50
One-year .Mac subscription	$99
PowerShot S400 camera	$215
Retrospect Desktop 6.0	$102
Snapz Pro X 2.0	$29
Tactile Pro Keyboard	$79
Three 160GB IDE 7,200-rpm hard drives	$276
Turbo Mouse Pro USB	$102
Two 20.1-inch Dell UltraSharp 2001FP LCD monitors	$1,396
Two FireWire Hot Swap trays	$60
TOTAL	**$5,937**

had to choose only one Mac, it would be a laptop, but I prefer one of each.

SHOP SMART I like to minimize the number of companies I'm ordering from to keep shipping costs and hassles low—that's why I bought a refurbished iBook from the same place I bought my mouse, keyboard, AirPort card, and a couple of applications. As for finding low prices, I go to dealnews (www.dealnews.com) for sales and specials. I found a router for $5 after rebates, as well as the 20.1-inch Dell LCDs, which were $2 cheaper than the 17-inch Apple Studio Displays I considered.

If I don't find any sales on the product I'm buying, I then go to a price comparison service. I'm not picky about which one—I'll use whatever's handiest or the one I remember best, and only check others if I'm not satisfied with the results of the first.



WHAT'S MISSING I've never used a scanner, so that didn't strike me as important, and although I own a fax machine, I use it so infrequently that I thought my user could substitute Panther's fax-sending capability and a graphics program for adding signatures.

Other options, like Objective Development's LaunchBar, are absolute necessities for me. LaunchBar is the best alternative interface to launching applications I've ever seen, and it saves me time every day.

Of course, multiple backup drives are also essential. A good backup strategy includes three rotating backups, with one of those stored off-site. Anyone who maintains only one backup is not taking sufficient security measures. Apple's .Mac offers a great package. I wanted it mostly for transferring files with clients, but having a backup e-mail address is also a good thing. And .Mac's photo-album sharing can't be beat, especially for freelance writers who need an easy way to show photos to their editors.

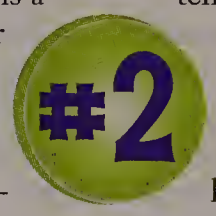
THE VERDICT I'm quite happy with my final list. I'm a little surprised that I was able to stick to my budget and still include the laptop and some extras that—although very useful—aren't technically essential, such as the Creature II speakers.

THE HASSLE-FREE USER, continued

PRODUCT	PRICE
1.6GHz Power Mac G5	$1,799
2.4GHz Dell Dimension 4600	$789
19-inch electronblue IV CRT monitor	$379
200GB FireWire 800/FireWire 400/USB 2.0 Hard Drive	$260
512MB RAM for Power Mac	$100
Brother HL-5170DN laser printer	$400
Canon CanoScan LiDE 50 USB 2.0 scanner	$100
Canvas 9 Professional	$350
Data Rescue X	$77
Disk Warrior 3	$75
EtherFast Cable/DSL Router with 4-port switch	$45
HP Fax 1230 fax machine	$200
Microsoft IntelliMouse Optical	$12
Microsoft Internet Keyboard	$21
Microsoft Office Basic Edition 2003	$149
Microsoft Office 2004 for Mac Standard Edition	$360
MoniSwitch 2 USB (KVM)	$139
MX5021 speakers	$140
Norton AntiVirus 2004 for Windows	$40
PowerShot S400 camera	$350
Retrospect Desktop 6.0	$110
Toast Titanium 6	$80
TOTAL	**$5,975**

unknown, so I didn't buy a Mac version of Symantec's Norton AntiVirus. If I'd had a lot more money to spend, I might have added an antivirus application for that just-in-case-someday scenario, but I deemed it unnecessary for now.

What is necessary, however, is a Mac program that can repair disks and recover files. So I bought tools—Dantz Retrospect, Alsoft Disk Warrior, and Prosoft Engineering Data Rescue—for backing up that data and keeping the Mac in good working order. Whether you're a carpenter, a cook, or a computer jockey, you take care of your tools.



MULTIDEVICE FUNCTIONS I opted for a laser printer instead of an ink-jet. Editors and writers can burn through a lot of paper, and a laser printer is cheaper for that purpose in the long run. I chose a networkable Brother printer, for use with both the Mac and the PC. I also bought a separate scanner and fax machine; I'm not satisfied with Panther's built-in faxing, which just doesn't work reliably enough for me.

So why not buy a multifunction device? I considered one because it would save money. But I realized that my budget allowed me to purchase separate components, so I didn't hesitate to get a printer, a scanner, and a fax machine. I prefer the flexibility, quality, and reliability of separate peripherals. Multifunction devices tend to be a study in compromise. And should your device bite the dust, you've lost three important elements of your office, not just one.

THE VERDICT I'm pretty happy with the hardware selections, but I worry that I haven't given the user as complete a collection of software as I'd like. I was a little surprised that I got so much bang for my buck—for well under my $6,000 limit, I got two computers with monitor, keyboard, and mouse; a full complement of peripherals; and a solid core of software. When I completed my first pass at the list, I was under by approximately $80. Deciding how to spend that money—I eventually settled on Roxio's Toast—was one of the more difficult decisions I had to make. □

GO TO WEB:
See Adam's and Christopher's complete shopping lists—including where they found bargains—at **find.macworld.com/0025.**

TidBits publisher ADAM C. ENGST plans to spend his leftover $63 on SpamSieve. Contributing Editor CHRISTOPHER BREEN wonders if Adam might want to loan him that $63 so he can buy some extra RAM. Both have home offices of their own.

WEB ICON BY PAUL HOWALT

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Online Banking Made Easy

Intuit's Quicken is terrific for finding how much you really spent on clothes, lattes, and computer equipment last year, and it lets you back up your records with a few mouse clicks. But you're missing out if you use it only as a paper substitute. With online banking, you can eliminate the drudgery of typing transactions and mailing paper checks, and you can keep a close watch on your money.

Here's how to avoid the pitfalls when using online services for your bank and credit card accounts. Although I'll refer to procedures for Quicken 2004 ($60; 800/811-8766, www.quicken.com), other recent releases also support online banking features.

Direct to Quicken

Online banking saves time by letting you transfer transactions directly into your Quicken account via the program's Direct Connect feature or by downloading and importing files from your bank's Web site. Either way, you'll always have accurate records on hand for budgeting or if the IRS comes knocking.

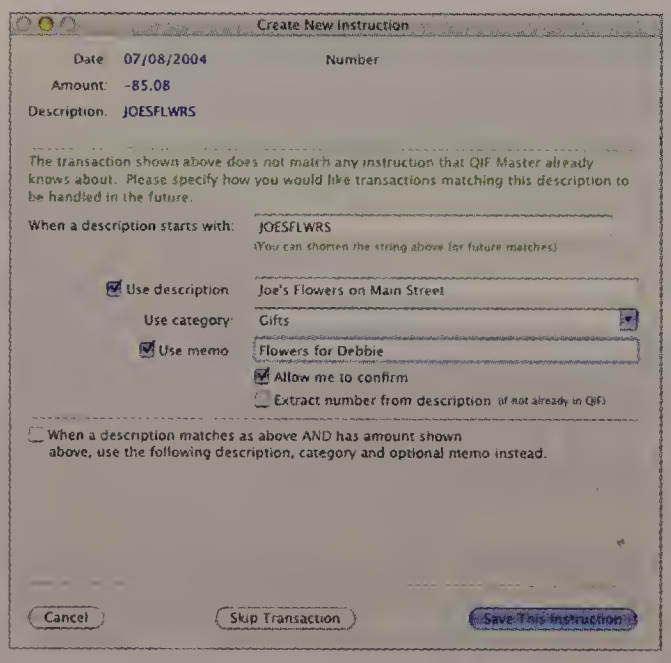
Before you use Direct Connect, you have to register with your bank to obtain a customer ID and password. To enable online banking in Quicken, select Window: *account name*. Select the account name and click on Edit. In the window that appears, click on Edit Online Access. The Quicken Assistant walks you through the steps.

You'll need your bank's routing number (the nine-digit number at the lower left corner of your checks) in addition to your account number and customer ID.

Each time you connect, Quicken queries your bank's server for new transactions and displays them in the Download Transactions window, where you can accept them into your register. Quicken automatically notifies you if a transaction matches one you've already entered by hand.

Tip: At some point you may change your mind about the type of access you want. If the option is grayed out, go back to the Edit Online Access window and use the Quicken Assistant to change your setup.

By the Rules Stop editing all your downloaded transactions by hand and let QIF Master do the work for you.



Web Downloads

If Direct Connect isn't an option, you may still be able to download transaction files from your bank's Web site. (Go to find.macworld.com/0007 to see what type of online connectivity your bank supports.) Typically you specify a range of dates, and the bank sends the corresponding transactions to your Mac in a special text file. The procedure for importing the transactions depends on which file format your bank uses.

QIF (Quicken Interchange Format) wasn't designed for exchanging data with banks online but is compatible with older versions of Quicken. When you open a QIF file using Quicken's Import QIF command (File: Import QIF), Quicken transfers the data directly into the foremost account register without checking for duplicates—you have to weed them out manually. In other words, it won't match a cleared check with the mortgage payment you already entered in the register.

QFX (Quicken Financial Exchange) is based on an XML specification developed jointly by Intuit, Microsoft, and CheckFree, the company that processes electronic bill payments for Intuit. It supports a broader range of transactions than QIF (tax forms, for example).

Some banks give you the option of downloading QFX files from their Web sites, a feature Intuit calls Web Connect. Unlike QIF, Web Connect requires you to enable accounts using the Quicken Assistant. When you download a Web Connect file to your Mac, Quicken launches, processes the transactions, and displays them in the Download Transactions window, just as it does with Direct Connect.

QFX files are text only, so they're fully Mac compatible. But Quicken 2004 won't run automatically if you use Safari to download—you have to open the QFX file manually in the Finder or in Safari's Downloads window, or import it with Quicken's Import Web Connect command (File: Import Web Connect). You can use Microsoft Internet Explorer if you've still got a copy of it on your computer. Quicken 2003 users can also use a handy AppleScript to prepare QFX files for import—see find.macworld.com/0008 for details.

A Troubleshooting Treasure

Alas, whether you use QIF or Web Connect, downloaded transactions often require considerable tweaking—the payee names in my credit card accounts are often cryptic ("BestRest#42," for instance). If you're as obsessive about details as I am, you can spend almost as much time editing as you would entering the data from scratch. Fortunately, I've discovered a shareware gem called QIF Master ($16; www.thewoodwards.us/sw/), which does the work for you.

QIF Master reads QIF or QFX files, edits the transactions according to your rules, and produces a QIF file ready to import into Quicken. For example, if you're a Big Mac junkie, you can set up a rule that looks for transactions starting with "MCD" and changes the payee to "McDonald's."

QIF Master also lets you specify default memos and categories, and you can tell it to pause and let you confirm changes. If your bank lists generic payees for handwritten checks (mine uses "Fed Clearing Debit"), that pause gives you a good opportunity to insert something more descriptive.

When QIF Master encounters a transaction that doesn't match an existing instruction, it lets you define one on-the-fly (see "By the Rules"). Once you've set up instructions for most of your payees and vendors, updating your register takes only a few minutes from download to import.

Paperless Payments

If you've ever had to fork over a late fee because you forgot to mail a check in time, you'll appreciate the benefits of paying bills electronically. Many banks let you make payments from your account on their Web sites for free, but you still have to download the transactions or enter them manually.

Some banks also let you pay bills directly from your Quicken register. As with Direct Connect and Web Connect, you have to enable bill payment in the Quicken Assistant. Fees vary, but the charge is usually less than $10 a month. If your bank doesn't offer direct payment, you can subscribe to Quicken Bill Pay (go to find.macworld.com/0009), which costs $9.95 per month for the first 20 transactions and $2.49 for each additional 5 transactions. Although 50 cents a transaction sounds expensive, remember the 37 cents you'd have spent on a stamp. Electronic payments can also save you hefty late penalties. For me, that's worth the additional 13 cents.

With either service, you need to type each payee's address, account number, and other information only once. Recurring bills like rent are a snap if you use direct payment along with automatic scheduling, which lets Quicken remind you when a payment is due or automatically enter the transaction in your register.

Direct payments are reliable if you take simple precautions. Banks send paper checks to payees that don't accept electronic transfers, so the bank usually requires around four days of lead time for all payments just in case. It's also a good idea to review your bills periodically to make sure your payee's address hasn't changed, and always double-check the amount and date of the payment. Most banks will take responsibility for snafus that aren't your fault, and some will handle late fees if they make an error. Banks don't recommend direct payment for tax or court-ordered payouts, because the penalties are usually more severe.

The Bottom Line

If something goes awry when you're banking online—say you get an error message when you try to download transactions—try calling your bank's technical support first. You can also visit Macworld.com's Intuit forum (www.macworld.com/forums).

In more than six years, though, I've yet to experience a problem I couldn't solve with a phone call or two, and I can't imagine doing without online banking. Give it a try, and you'll also wonder how you ever managed without it. □

Longtime *Macworld* contributor FRANKLIN N. TESSLER is a radiologist in Birmingham, Alabama.

ICON BY PAUL HOWALT

BRAIN FOOD

Le Mot Juste on Your Mac

Don't know a *poule* from a *pool*? Wondering whether you mean to *insure* or *ensure* a package's arrival? Luckily, a host of reference resources—from foreign language dictionaries to encyclopedias—is available for OS X. Here's a sampler:

> **Ultralingua Dictionaries** ($30 per language; www.ultralingua.com). Load these foreign language dictionaries on your Mac or Palm. Buy only the modules you need—for example, Spanish, French, German, and even Esperanto.

> **Houghton Mifflin eReference** ($35; www.houghtonmifflinbooks.com/eref/). This package wraps up *The American Heritage Dictionary,* fourth edition, and *Roget's II: The New Thesaurus.* You can access them both from within Microsoft Office.

> **Lexico CleverKeys X** (free; www.cleverkeys.com). Don't want to shell out a dime for basic reference needs? This utility gives you access to Dictionary.com and Thesaurus.com definitions from contextual menus or OS X services.

> **Write Brothers Word Menu** ($35; www.wordmenu.com). Explore words in a number of ways, from traditional lists to a visual Fractal Browser. (See our review on page 45 for details.)

> **Ultralingua Eureka Encyclopedia** ($30; www.ultralingua.com). Search for topics by keyword among 300,000 entries, or take advantage of Eureka's thematic organization.

> **Encyclopaedia Britannica Ultimate Reference Suite 2004** ($70; http://store.britannica.com). This DVD or CD-ROM bonanza includes three encyclopedias, Merriam-Webster dictionaries and thesauruses, an atlas, and historical timelines. (See *Reviews,* January 2003, or find.macworld.com/0011.)—SCHOLLE SAWYER McFARLAND

Create Your Own Music Video

The right music can convey the mood of an event in a way that photos and movie clips alone can't. iMovie 4 is particularly well suited to creating music-driven montages. Unlike iPhoto, iMovie lets you fully control a slide show's timing, transitions, and length. Even better, you can combine photos with video clips. This is a great way to share memories from your last vacation or family get-together.

The trick to creating a successful montage is editing your images so they match the rhythm and tempo of your music. I'll show you how to use iMovie 4's editing tools—including bookmarks, audio scrubbing, and timeline snapping—to precisely time your photos and movie clips so they sync with an imported audio track.

Prepare Your Soundtrack

Your first job is to import music into iMovie. In a new iMovie project, click on the Audio button and select an appropriate song from your iTunes library. For best results, use a song that has a strong rhythm and whose lyrics complement your visuals. For example, if you're making a montage of a recent road trip, you might consider downloading Rosemary Clooney's big-band rendition of "On the Road Again" from the iTunes Music Store (or, for a different mood, Ghoti Hook's punk version). I once made a video tribute to my dog and set it to Barry White's version of "Just the Way You Are." It brought the house down.

Once you've chosen a song, you'll use iMovie 4's bookmarking feature to mark where in the song each new image or scene should start. Bookmarks are timeline "guideposts" indicating points you want to refer to later. By pounding these guideposts into the timeline now, you'll have an easier time positioning your clips to match the rhythm of your music.

Bookmarks appear as small green diamonds over your timeline (see "Timing Your Cuts"). To create a bookmark, you typically move the iMovie playhead to the desired location in the timeline and then choose Add Bookmark from the Bookmarks menu. However, bookmarking music is challenging; the timeline doesn't show you where a song's refrain occurs, for example. Luckily, iMovie offers some new features that can help.

Bookmark As You Play To develop a rhythm, and to better sync your cuts to the flow of the music, insert bookmarks as you listen to the song.

Play the iMovie project from the beginning, and press ⌘-B each time you hear a spot where you'll want a scene change—for example, at the end of every phrase or at important beats.

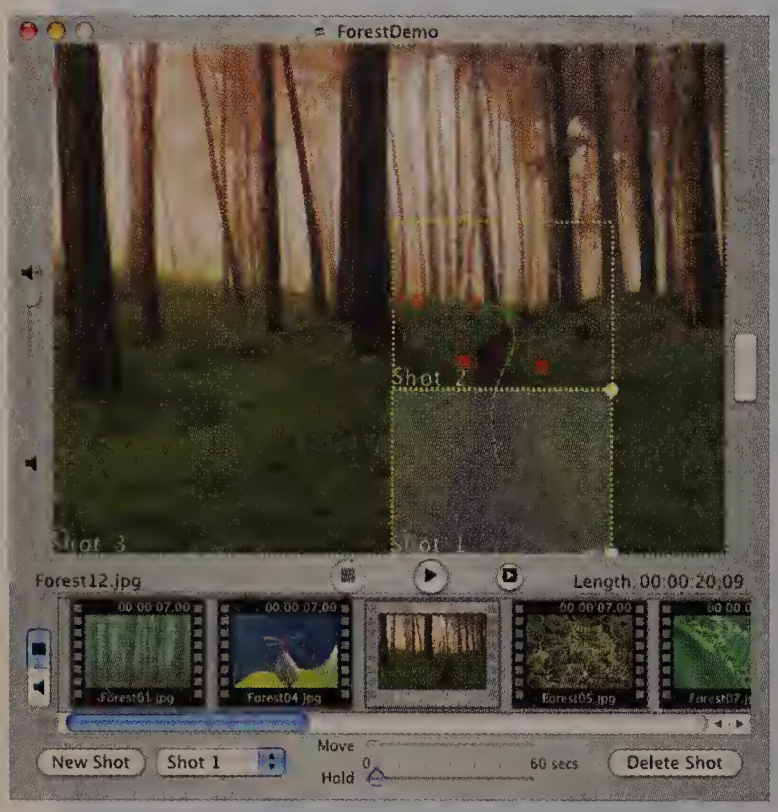
If you need to remove a stray bookmark, just drag the playhead to the bookmark and choose Delete Bookmark from the Bookmarks menu.

Scrubbing for Precision If you're having trouble accurately placing bookmarks, use iMovie's new audio-scrubbing feature to better control playback speed.

Beyond Ken Burns

iMovie's Ken Burns effect is great for adding basic panning and zooming effects to your photo slide show. But if you want to do something more complex—for example, create an elaborate panning path that loops around an image—you'll need a more robust slide-show creator.

Two such programs are Still Life, from Granted Software ($25; www.grantedsw.com), and Photo to Movie, from LQ Graphics ($50; www.lqgraphics.com). Both programs specialize in creating music-driven slide shows and have advanced options for panning and zooming—such as panning along a curve, rotating the camera while in motion, and creating multiple still shots of the same image. In this example from Still Life (left), the camera turns to follow a winding path through the woods. You can download trial versions of both programs before you buy.



GO TO WEB:
www.macilife.com/digitalhub
Download a one-minute video to see these audio-syncing techniques in action.

First, zoom in on the timeline by adjusting the zoom slider. While holding down the option key, slowly drag iMovie's playhead left and right. Your audio playback will match the speed and *direction* of the playhead. If the playback is still too fast, zoom in further. If it's too slow, zoom out.

Visualize Your Audio iMovie 4 can also display an audio track's waveform—a visual representation of changes in the track's volume. This is useful if you need to locate pauses or particularly loud moments, such as the whack of a snare drum.

To see the waveform, open iMovie's preferences and select the Show Audio Track Waveforms option. If your song's waveform isn't visually dramatic enough to help you find what you need, you can intensify it by selecting the song in the timeline and pressing the up-arrow key. Conversely, the down-arrow key will make a waveform less intense.

CHECK IT OUT

Store Photos on an iPod

If you're constantly deleting digital photos from your camera's media card to make way for new ones, you need more storage. You could invest in additional media cards. But Belkin offers a better solution—the $90 Belkin Digital Camera Link for iPod (www.belkin.com/ipod/cameralink), which lets you download the photos to your iPod. Unlike Belkin's Media Card Reader, which required that you insert your card, the Digital Camera Link lets you transfer photos directly between your camera and your iPod. To download photos, just plug your camera's USB cable into the device, plug the device into the iPod's connector, and then press the Transfer button. The Digital Camera Link is also faster than the older device. It can download the contents of a full 128MB card in three to five minutes.

To use the Digital Camera Link, you'll need a third-generation iPod with a dock connector, and a compatible digital camera. (Go to the company's Web site for a complete list of supported cameras.)—KELLY LUNSFORD

Add Visuals

With your bookmarks set, you're ready to assemble your photos and video clips. If you're using photos, be sure to turn off the Ken Burns option in the Photos pane. You can apply the effect later, after you've refined the placement and duration of each photo.

You'll want to piece together your images so a new photo or movie clip appears at every bookmark. Here are a few ways to make this process easier:

Make It Snappy Instead of struggling to position a clip at the exact spot you've bookmarked, let iMovie do the work for you. Open iMovie's preferences and turn on the Timeline Snapping option. As you drag items within the timeline, they'll automatically align to any other items they encounter, including bookmarks.

Trim Clips Since most of your video clips will be longer than the space you've allotted, you'll need to edit them to fit within your bookmarks.

Editing a video clip is now much easier, thanks to iMovie's new direct trimming feature. Direct trimming lets you hide unwanted footage without irrevocably altering the clip—so you can refine your edits later if you change your timing or need to rearrange your images.

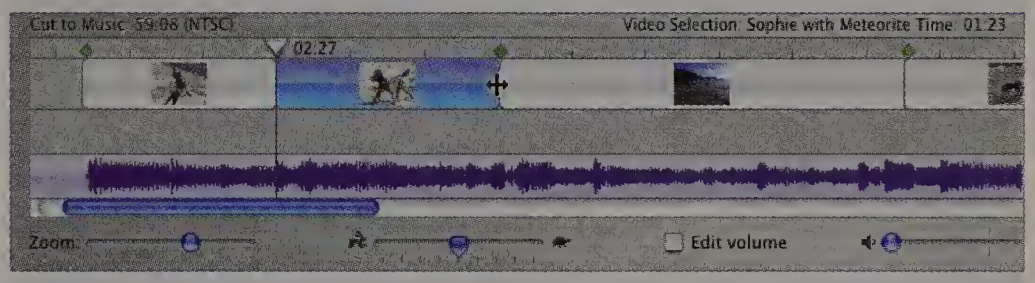
First, trim the clip's starting point so it comes in at just the right moment. Click on the clip's left edge and drag it inward until you reach the beginning of the scene. Make sure the front of the clip aligns with your first bookmark.

Next, click on the right edge of the clip and drag it to the left or right until it snaps to the following bookmark. Repeat this process for each clip.

Make Room for Transitions When iMovie inserts a transition between two clips, it lops off some of the first clip's footage. But you can compensate for this—and ensure that your transitions appear right on cue—by leaving some extra footage at the end of each clip.

To do this, click on the right edge of your trimmed clip or photo in the timeline and slowly extend it to the right as you watch the time-code readout just above the timeline. How far you extend the clip will depend on the duration of the transition you're using. For example, if you're planning a 15-frame (half-second) cross dissolve, you'll want to lengthen a clip so that it extends roughly seven frames beyond its bookmark.

As you make these kinds of small trimming adjustments, you may find that timeline snapping works against you. If so, you can quickly toggle the Timeline Snapping feature on and off by holding down the shift key while trimming. Now drag the next clip into place and add the transition. It should fall right at the bookmark you set.



Timing Your Cuts In iMovie 4, bookmarks appear as small green diamonds above the timeline.

Add Motion to Photos If you're using photos, you can give them a sense of motion by applying iMovie's Ken Burns effect. First, make sure that you've downloaded Apple's iMovie 4.01 update. (It fixes a bug that caused the Ken Burns effect to zoom out too quickly.) Control-click on a photo and choose Edit Photo Settings from the contextual menu. In the Photos pane, select the Ken Burns Effect option, set up the desired move, and then click on Update. □

Contributing Editor JIM HEID is the author of *The Macintosh iLife '04* (Peachpit Press/Avondale Media, 2004) and its companion Web site, www.macilife.com.

ICONS BY PAUL HOWALT

Illustration in Three Dimensions

Rob Magiera, the founder and principal of Noumena Digital (www.studionoumena.com), was trained as a traditional painter, but he embraced digital illustration in 1986. He saw in digital techniques the potential for constant, immediate revisions.

After working for years with two-dimensional applications such as Adobe Photoshop and Illustrator, Magiera taught himself how to use three-dimensional applications, which opened up new creative possibilities for the designer.

"As an artist, I was always fascinated by the unique qualities that various media offered and how they could be exploited to add to the overall effectiveness of the finished art," Magiera says. "I gravitated to 3-D because it's the one area of computer graphics that is completely unique—you can't do it without a computer. Your canvas is now totally plastic. You can invent something that hasn't been seen before."

Alias Maya Complete ($2,000; 866/226-8859, www.alias.com) lets designers create three-dimensional worlds out of nothing. While Maya is known primarily as an animation tool, Magiera uses it for print projects that would otherwise be unthinkable. It's a complex program, but with that complexity comes extraordinary control.

This level of control is evident in Magiera's reality-bending work on an American Express card ad campaign. The campaign's art director wanted to depict the credit cards from different angles. However, it wasn't feasible to use a camera to shoot all the real cards, each in every language of the campaign, each from several different angles. And faking shots in Photoshop wouldn't produce images credible enough to hold up at the huge sizes required for the campaign.

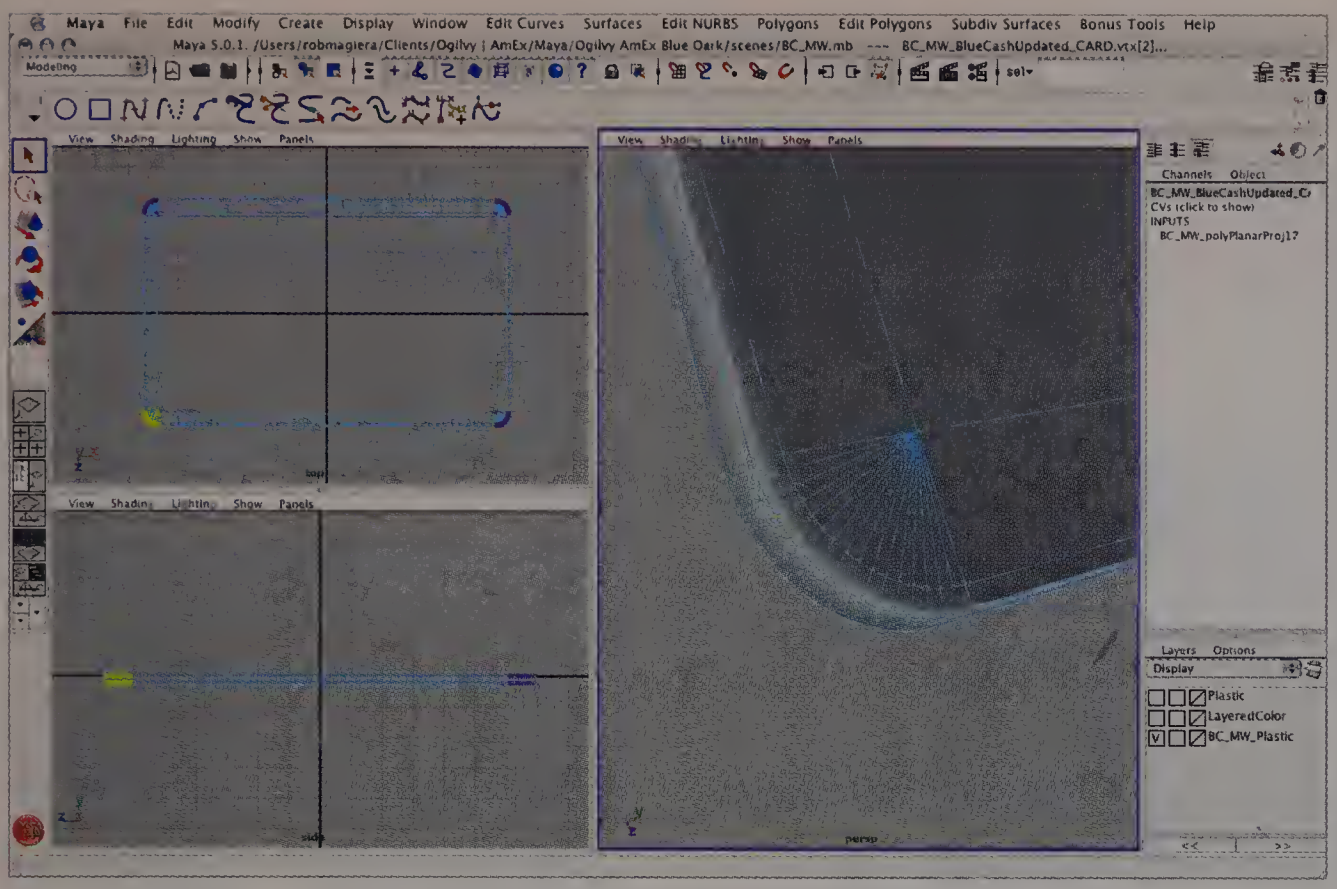
Using 3-D technology in combination with Photoshop and Illustrator, Magiera manipulated a virtual card. This required relatively little time and expense yet produced a highly realistic result. For each version of the American Express ad, Magiera used the original Maya model, simply changing the text when necessary, repositioning the card, and rendering it again.

Says Magiera, "If you were starting with a photograph and retouching it, how could you shoot 30 cards and stay in budget—eight variations of each card, each ad with a different angle? It's an ad campaign they wouldn't have done." □

FRITH GOWAN is a freelance writer in the San Francisco Bay Area.

The Final Image

This ad may look simple, but it required some serious software: Alias Maya Complete 5, Adobe Illustrator 10, and Adobe Photoshop 7. Magiera ran these applications on a dual-1.25GHz Power Mac G4 with 1.5GB of RAM. He viewed his work on a 20-inch Apple Cinema Display. The Perfection 3170 Photo scanner and Stylus Photo 2200 printer, both from Epson, rounded out his toolbox.



Make a 3-D Model of the Card

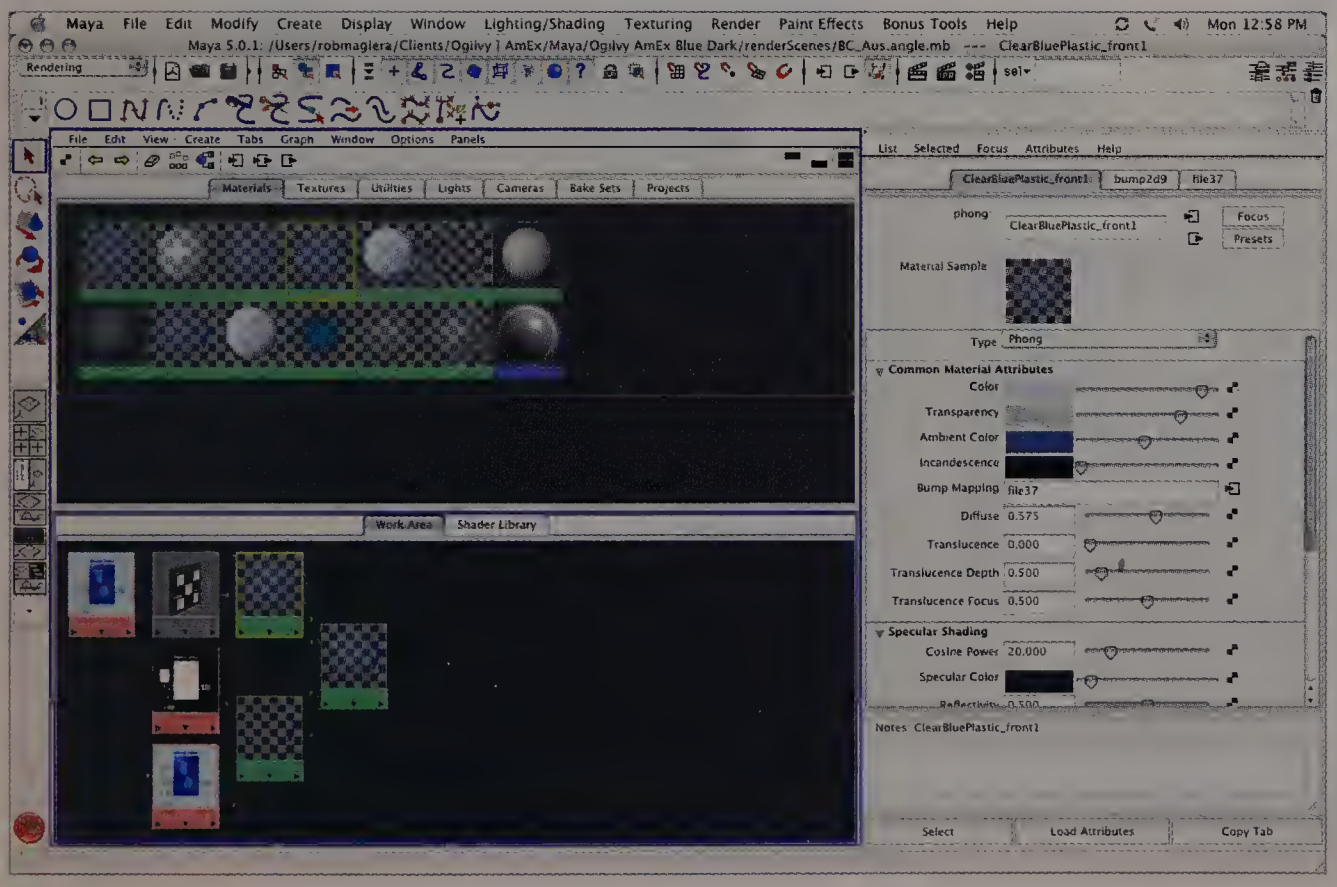
Magiera used a digital scan of the card as a template to painstakingly create a card model. In print work, there's no animation to distract from lower-quality images, so building high-quality models is critical.

In the two left-hand panes, you can see the wire-frame model from two angles. On the right is a close-up of a bevel on the card's edge, which he added so that light would hit the edge more gently in the final image.

Magiera modeled some elements of the card, such as the edge, individually so he could control them with greater precision. "If you try to do it all at once, it looks like a computer-generated image," he says. "To mimic real life, you need an incredible amount of visual information."

Create the Card Texture

After completing the wire-frame model, Magiera began to give it a more realistic look by applying what Maya calls *materials*. Materials are made up of *textures* (another Maya term) that describe attributes such as color and reflectiveness. The image you see here is a texture that Magiera built in Photoshop and Illustrator. He created the type in Illustrator, and the hologram and computer chip are based on shapes he made in Illustrator and colored in Photoshop. He flattened the Photoshop images and saved them as TIFF files, and then imported them into Maya.

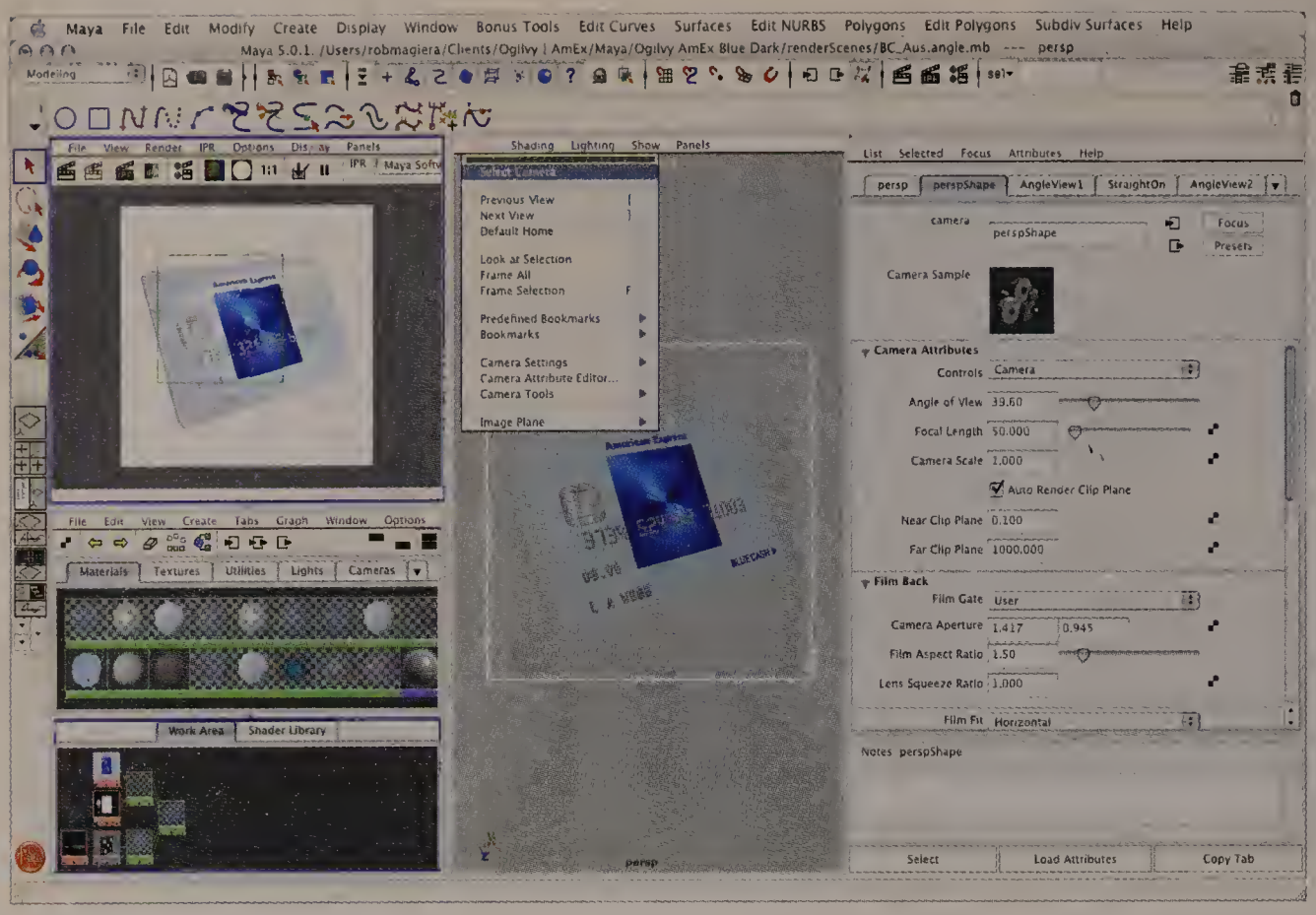


Apply Materials to the Model

Magiera composed the card of multiple materials; for example, the hologram material was different from that of the card background. The various materials reacted differently—and more realistically—to light applied later in the process.

At this point, Magiera set how Maya should project materials onto the model, and he defined opacity levels for each area using transparency attributes. He also defined *bump mapping* for the materials; that is, he made the type appear raised without modeling every angle.

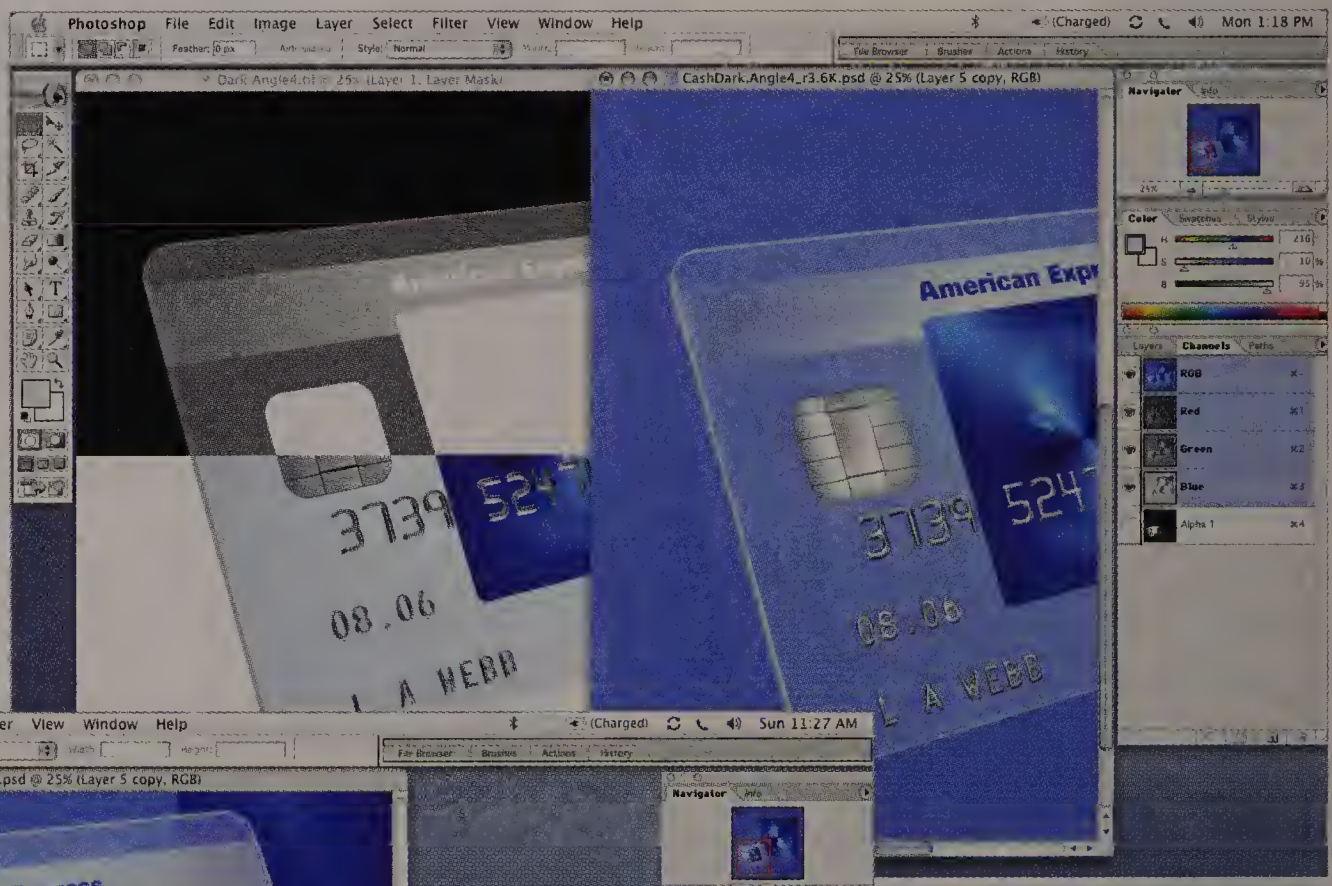
continues

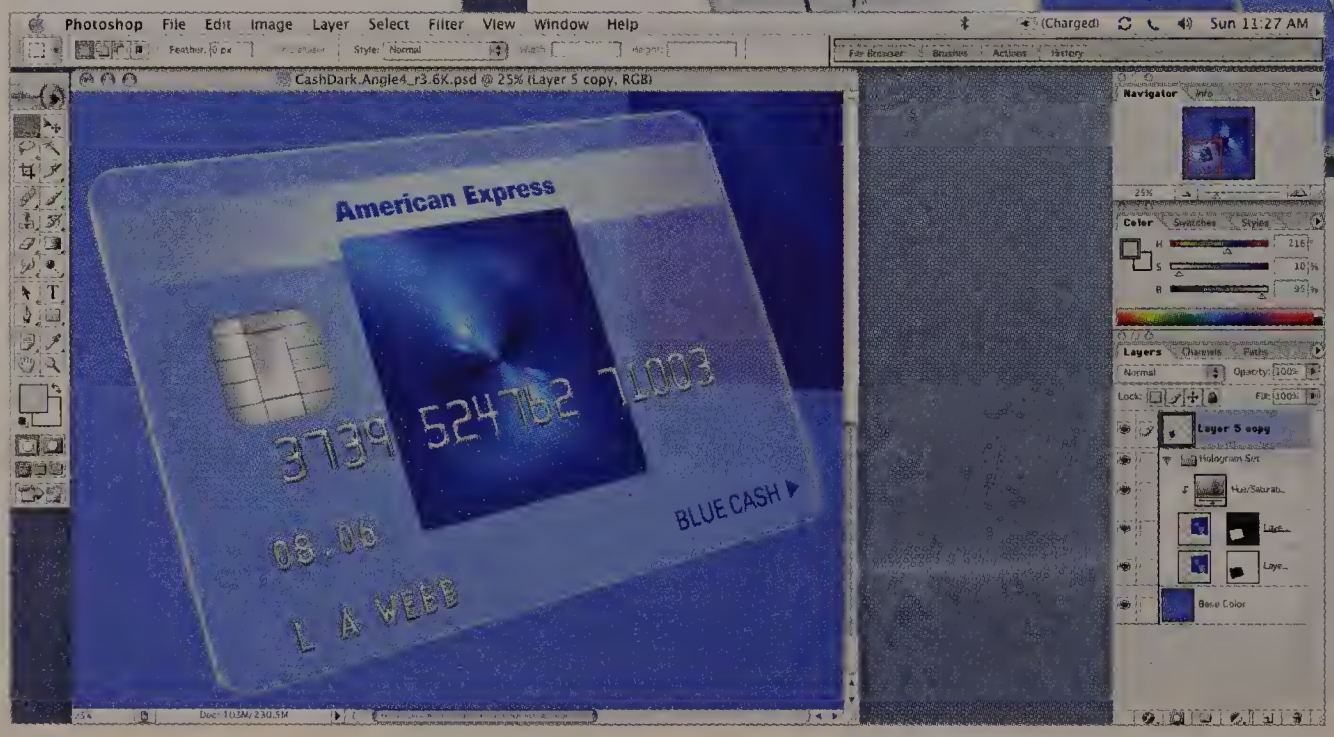


Preview and Render the Image
Maya uses the analogy of a camera to virtually photograph images. Magiera adjusted the camera settings (including lens size, aperture, and focal length) until he was happy with the image. A wide-angle lens distorted the image perspective a bit.

At the stage you see here, Magiera still didn't have an image he could export to 2-D applications. Maya first had to *render* the image; that is, calculate all the aspects of the model and crunch data about the shapes, texture, and camera settings. Rendering can take time—roughly an hour for a 6,000-by-6,000-pixel image. However, Maya can display a small, low-resolution test-render image (shown at the top left) that changes to reflect altered camera settings. "It's the equivalent of doing Polaroids on a photo shoot," says Magiera.

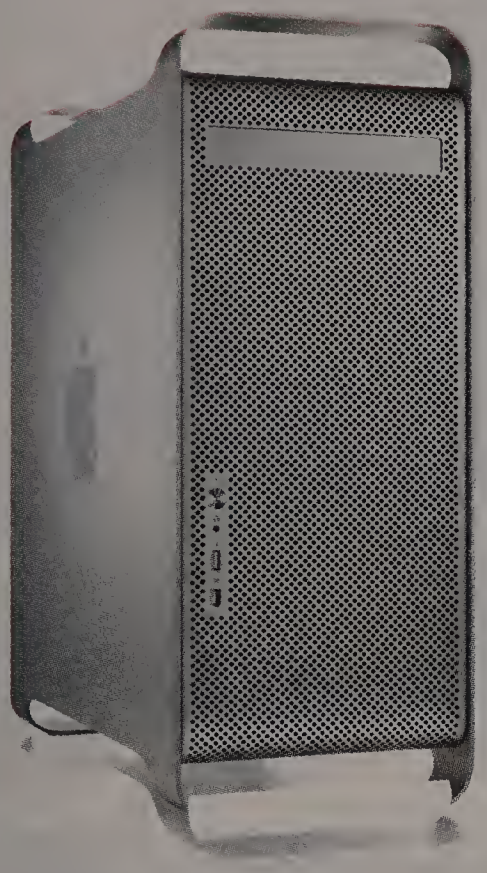
Render the Layers and Open the Card in Photoshop
Magiera rendered the card and opened it in Photoshop. Maya saved the transparency as an alpha channel, which Magiera applied as a selection mask to knock out the transparent portions of the image. On a real card, the magnetic strip is entirely opaque. In this screenshot, you can see the opacity gradient Magiera added.





Composite and Fine-Tune
In Photoshop, Magiera combined individually rendered elements and fine-tuned selected parts of the combined image. He also returned to previous steps to get better results; for example, he sometimes tweaked the original wire-frame model. "There's a tight integration between Illustrator, Photoshop, and Maya all the way through," Magiera notes.

Tell us about your Mac...



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† Or faster CPU. Subject to availability at time of drawing.

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Put a Case on It

Your iPod deserves some respect, doesn't it? Of course, you'll also want to protect it from drops, scratches, and other commuters. We searched out the coolest cases for the iPod mini (this page) and the full-size, original iPod (following pages). There's an iPod case out there for everyone—executives, joggers, and hip kids—in every color of the rainbow. □

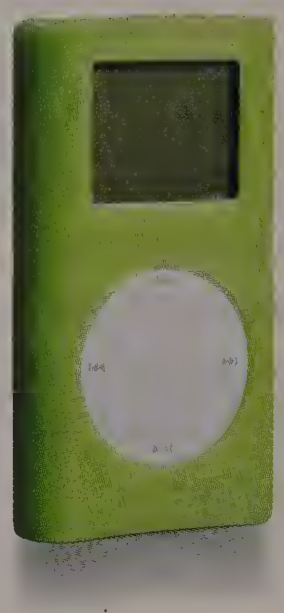
Where the Wild Things Are

Mini SportSuit Safari ($20)

CONTACT: Marware, 954/927-6031, www.marware.com (Other cases available.)

WHY WE LIKE IT: With a fuzzy plush exterior and animal prints, the Mini SportSuit Safari is nearly as cute as your favorite childhood stuffed animal. It has a built-in belt loop, a neoprene lining, and a removable, adjustable quick-release lanyard so you can wear it around your neck. This may be the case you'd most like to have on your mini should you drop it. But the fact that you can't access anything except the hold button and the headphone jack without taking your iPod out might aggravate you.

COLORS: black, giraffe, leopard, pink, white, zebra



Silicone Enhanced

iSkin Mini ($25)

CONTACT: iSkin, 416/924-9607, www.iskin.com

WHY WE LIKE IT: If you wonder why you'd buy a fashionable iPod mini in your choice of color only to cover it in a brightly colored case, we have six words for you: *this case glows in the dark*. More practically, the iSkin Mini is a molded silicone case that comes with a hard plastic screen protector—just slip the mini in place, and four soft mounts keep it elevated. The iSkin Mini also has a removable rotating belt clip. It leaves the scroll wheel, hold button, and headphone jack exposed, and gives you access to the dock connector via a bottom flap.

COLORS: glowing colors: light green, orange, purple, white; other colors: black, blue, gray, pink, white

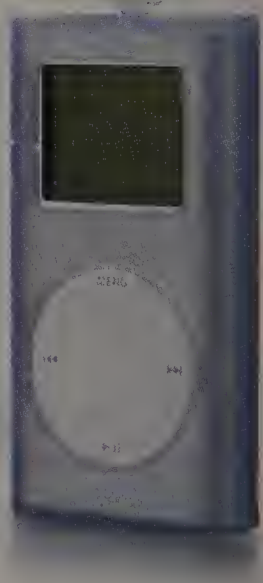
Protective Skin

SkinTight Mini Skin ($20)

CONTACT: Speck Products, 650/463-8914, www.speckproducts.com (Other cases available.)

WHY WE LIKE IT: The Mini Skin is a shock-absorbing rubber case that comes in five playful translucent colors. To further show off your iPod mini, it also offers a removable quick-release lanyard so you can wear it around your neck. The case leaves the screen and scroll wheel exposed, but it protects the mini's corners while giving you access to the dock connector, the hold button, and the headphone jack.

COLORS: blue, clear, gold, lime, pink



Keeps It Covered

DLO Action Jacket mini ($30)

CONTACT: sold through Netalog, 866/800-4763, www.everythingipod.com (Other cases available.)

WHY WE LIKE IT: With a reinforced black neoprene cover, built-in belt loops, an armband, a clear plastic screen protector, and a removable swiveling belt clip, the Action Jacket mini offers protection for your iPod mini. It helps the mini resist scratches and can act as a shock absorber—on the back and sides, at least—in case of more-serious bumps. A bottom opening gives you easy access to the dock connector. But the Velcro tab that secures your mini covers the hold button, which you likely access often to lock the player's controls. And the cutout that leaves the scroll wheel helpfully exposed doesn't fit perfectly over the wheel and tends to gape unattractively.

COLOR: black

Tightly Wrapped

RadTech miniSleevz ($18)

CONTACT: RadTech, 314/972-7623, www.radtech.us

WHY WE LIKE IT: The miniSleevz is a slim, formfitting sleeve case for the iPod mini. A clear screen protector covers the mini's display, and while the miniSleevz also covers the scroll wheel, all the controls still work through the suedelike fabric. By itself, the miniSleevz probably won't be much help if you drop your mini (it leaves the top and bottom surfaces exposed), but the surprisingly strong material should offer plenty of protection against scratches.

COLORS: black, indigo, light purple, purple, red, titanium

continues

PHOTOGRAPHS BY STACY KUCSERKA

Take your best friend for a walk

(and you can bring your dog too.)

mini SportSuit Safari

Take your mini on Safari. Flamingo, Zebra, Leopard, Giraffe, Polar Bear, or Panther fleece keep your mini safe and warm.

MARWARE

SportSuit Convertible

Multifunctional protection for your iPod or iPod mini. The Convertible has as many features as the day is long right out of the box, as well as an impressive list of optional accessories to suit your every whim.

MARWARE

Boostaroo

Boostaroo amplifies the audio from your iPod and lets you share your music, and the love, three ways.

boostaroo

LiliPod Watertight case

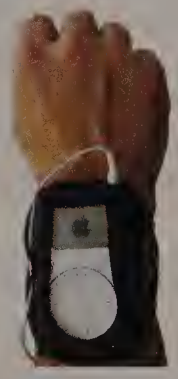
Fly Fishing? Swimming? Run through sprinklers? LiliPod keeps the iTunes spinning while you sing in the rain or play Marco Polo at the pool.

LiliPod

iSkin eVo

The redesigned eVo sports evolved belt clip, screen protector, vivid colors, and compatibility with top-mounted iPod accessories.

iSkin



RunAbout for mini

Comfortable protection for the mini. A patent-pending design, the runabout is the easiest way access your mini on the run. Strap it on.

MARWARE

iPod mini Armor

With a rugged aluminum shell, black velvet interior, and removable docking port cover, it's the best protection you can buy for your iPod mini.

matias

Dr. Bott .com

Buy Dr. Bott products at your friendly neighborhood **Mac** store.
Find one online at http://www.drbott.com/local phone: 800.541.1167

Details, Details

i-Volution ($50) and Classic ($55)

CONTACT: Vaja, info@vajacases.com, www.vajacases.com (Other cases available.)

WHY WE LIKE IT: Vaja's full-grain leather cases are handcrafted and custom-made, and the attention to detail is impressive. The rigid, semipadded i-Volution, with its clear, protective face and 70-plus color combinations, and the executive-appropriate Classic, with its flip cover and pocket, are stylish cases that look, feel, and work great.

iPODS THAT FIT: iPod with dock connector, original iPod

COLORS: the Classic comes in 7 color combinations; the i-Volution comes in 73 color combinations

One of a Kind >>

Sheldon ($25)

CONTACT: Case Closed Bags, 866/366-0913, www.caseclosedbags.com (Other cases available.)

WHY WE LIKE IT: The Sheldon is made for iPod users who want to stand out from the crowd. You won't find these patterns on any other case—whether it's the watery hues of miami geo, the skater chic of checkerboard, or the metallic iPod mini–like sheen of pink polish. This basic, protective case includes a belt clip.

iPODS THAT FIT: iPod with dock connector, original iPod

COLORS: checkerboard, metallic blue, miami geo, pink polish, silver bullet

<< Crumple Free

iPod Armor ($50)

CONTACT: Matias, 888/663-4263, http://halfkeyboard.com/ipodarmor/

WHY WE LIKE IT: If you're looking for the ultimate in crushproof protection, look no more. The iPod Armor is a molded aluminum shell that encloses the iPod, and you can attach an optional Armor Clip belt clip. Inside, a layer of dense foam keeps the shell from scratching your iPod.

iPODS THAT FIT: iPod with dock connector, original iPod, iPod mini

COLOR: aluminum

<< Functional Flip Cover

WaterField iPod Case ($40)

CONTACT: WaterField Designs, 877/546-1040, www.sfbags.com (Other cases available.)

WHY WE LIKE IT: Like most WaterField products, the company's iPod Case adds a bit of flair—with a splash of unique, patterned fabric—without being obnoxious. Its flip cover protects your iPod's face and controls but allows easy access to the buttons. It also doubles as a pocket for storing earbuds, a driver's license, or some cash. Unlike many cases, the iPod Case lets you use your iPod's dock base while it's in the case. The WaterField case also comes with a belt clip.

iPODS THAT FIT: iPod with dock connector, original iPod

COLORS: blue, lead, red, white

On Display

Showcase ($40)

CONTACT: Contour Design, 800/462-6678, www.contourshowcase.com (Other cases available.)

WHY WE LIKE IT: The Showcase frames your iPod with rubber edges to give you a solid grip and protect your iPod from impact. Its clear front and back panels let you show off your iPod's shiny surfaces and use all the buttons and ports. But we also like the Showcase's more practical features: you can get your iPod in and out of the case quickly, and the detachable belt clip doesn't leave an annoying protruding knob behind. Our only complaint is that the rubber case picks up dirt easily.

iPODS THAT FIT: iPod with dock connector, original iPod

COLORS: black, blue, green, light blue, pink, red, white, yellow

Simple Elegance >>

Covertec iPod Case ($40)

CONTACT: Covertec, sales.us@covertec.com, www.covertec.com (Other cases available.)

WHY WE LIKE IT: Covertec's iPod Case is a leather flip case in the same class as the Vaja Classic (above). The soft leather comes in several colors, and elastic sides provide a perfect fit. When we showed the case to friends, their first comment was, "It looks expensive!" Like the Showcase (at right), the Covertec iPod Case has a removable belt clip that doesn't leave a protruding knob when the clip is detached.

iPODS THAT FIT: iPod with dock connector, original iPod

COLORS: black, orange and black, red, tan

Your Bag's Best Friend

Timbuk2 iPod Case ($20)

CONTACT: Timbuk2, customerservice@timbuk2.com, www.timbuk2.com

WHY WE LIKE IT: For people who always carry a bag or backpack (especially one from Timbuk2), this iPod case is the one to get. Its padded, plushly lined pouch fits your iPod like a glove. You can securely attach it to the strap of your bag or your belt; a small pocket holds your earbuds. You can't access the iPod's buttons, but that's not necessarily a bad thing if you're trying to protect your iPod from the elements. (Bonus: thanks to elastic sides that stretch to fit, the Timbuk2 iPod Case is also a perfect match for many small digital cameras.)

IPODS THAT FIT: iPod with dock connector, original iPod

COLORS: black, burgundy, green, light blue, light green, navy blue, orange, pink, purple, red, silver, yellow

The Amphibian >>

LiliPod ($40)

CONTACT: Eroch Studios, info@lilipods.com, www.lilipods.com

WHY WE LIKE IT: If you spend a lot of time in or around water or snow, you've probably been afraid to take your iPod along for fear of getting it wet. Worry no more. The LiliPod is a waterproof case that seals your iPod safely (and snugly, thanks to foam lining) inside. Wear it on your belt or around your neck—only the extended headphone jack reveals its precious contents. You can't control your iPod when it's inside the LiliPod, but what do you expect from a waterproof case?

IPOD THAT FITS: iPod with dock connector

COLOR: white

<< iPod Activewear

SportSuit Convertible ($40)

CONTACT: Marware, 954/927-6031, www.marware.com (Other cases available.)

WHY WE LIKE IT: Perfect for active types who need a certain degree of flexibility, the SportSuit Convertible offers varying levels of protection and several carrying options. In its most basic state, it's a neoprene case with rigid walls, rubber grips, and a flexible, protective front. Add the removable lid, and you get a hard shell that can store your earbuds and remote while letting you use the iPod's buttons. It comes with a belt clip and an armband; optional accessories include a car mount, a bike mount, a lanyard, and a sport belt.

IPODS THAT FIT: iPod with dock connector, original iPod, iPod mini

COLORS: iPod mini colors: black, blue, gold, green, pink, silver; iPod colors: black, blue, graphite, navy, red, yellow

Pod on the Run

Incase Belt for iPod ($25)

CONTACT: Incase, 626/338-6400, www.goincase.com (Available at Apple Store locations and www.apple.com; other cases available.)

WHY WE LIKE IT: The Incase Belt is a running pouch done right. Although it's svelte and light, it protects your iPod in a padded neoprene compartment that includes a hidden pocket for cards and cash. A small hole in the belt lets your headphone/remote cable out (so you don't have to dangle it out the case opening), and a separate, zippered compartment with a clip holds your keys and coins. Finally, a mesh backing keeps the pouch from adding to your already-high sweat level.

IPODS THAT FIT: iPod with dock connector, original iPod, iPod mini

COLOR: black

Ultimate Adaptability >>

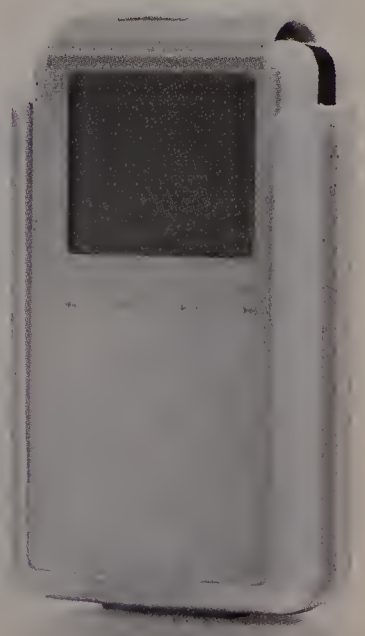
Xtremity ($30)

CONTACT: XtremeMac, 866/392-9800, www.xtrememac.com (Other cases available.)

WHY WE LIKE IT: The Xtremity can be used as either a slip-in holster or a fully enclosed case. It's designed to be the center of an iPod accessory system: the back of the Xtremity has a slot for attaching a number of custom add-ons, including a belt clip, a car or wall mount, and a wireless audio transmitter (not yet available).

IPOD THAT FITS: iPod with dock connector

COLOR: white and gray



Contributing Editor DAN FRAKES (www.danfrakes.com) has an unhealthy interest in cases and bags. Somewhere in the huge pile of iPod cases in his office, his traumatized iPod is hiding out. San Francisco–based freelance writer FRITH GOWAN likes to wear an iPod mini strapped to her head.

Hasta la Vista, Aqua

Mac OS X and Unix both have, at their cores, a command line. And just as Apple placed the glossy Aqua user interface atop OS X, open-source programmers have designed the K Desktop Environment (KDE) to give Unix a useful windowed interface. But while Unix users can't get Aqua without buying a Mac, any Mac user can use KDE. It just takes an adventurous spirit and a little ingenuity.

Why place a Unix-based windowed environment on top of Aqua (which is, after all, a Unix-based windowed environment)? Partly for the experience of stretching your Mac to its limits, but also because doing so lets you run many open-source and free alternatives to Mac applications.

Gather Your Gear

To run KDE, you'll need to install some other software. First, you'll need X11 (see "X11 Marks the Spot," *Geek Factor*, December 2003), which allows Unix machines to run graphical-interface programs and lets you control those programs with a mouse. Check to see whether X11 is already installed by looking for it in Applications: Utilities. If it's not there, you'll need to run the installer located on Panther Install Disc 3, in Packages: X11User.pkg. (X11 runs only on Panther.)

You'll also need to install Apple's developer, or Xcode, tools from the Mac OS X Xcode Tools disc that comes with Panther. You can also download the tools by signing up for a free developer account at http://connect.apple.com.

The last thing you'll need is Fink, an add-on Unix program that allows you to download, install, and update programs. This is also a free download, available at http://fink.sourceforge.net/download.

To use the newest revision of KDE, you have to tell Fink to recognize so-called unstable packages. (A package is usually deemed unstable if the application hasn't been extensively tested. At press time, there was still no firm date for a version of Fink that would support a stable KDE 3.2.) To do this, use pico, a Unix text editor, to edit the fink.conf file. First, make sure you're using an administrator account. Then open Terminal and type `sudo pico /sw/etc/fink.conf` at the command prompt. Enter your password.

Using your arrow keys to move the cursor, add `unstable/main` and `unstable/crypto` to the end of the line beginning with `Trees:`. Once that's done, press control-O and then press enter to save the changes; press control-X to exit pico.

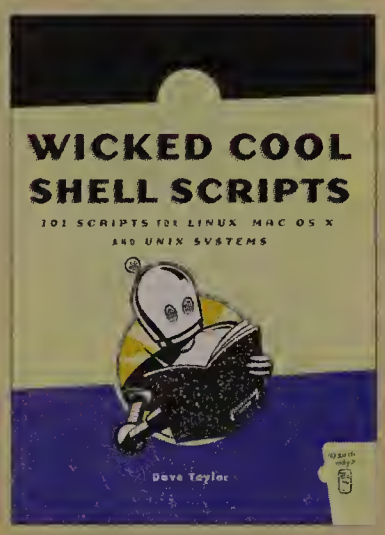
Back at the shell prompt in the Terminal window, make sure you're running the latest version of Fink by typing `fink selfupdate-rsync`. If you're connected to the Internet, Fink will search for newer versions. If it finds anything, let it install everything before you go on to the next step. (This may take a while, so plan on doing it during lunch or overnight.)

When the update is done, you have to edit the sources.list file to instruct another Unix program that Fink installs, apt-get, to download precompiled binaries of KDE. (These are readily available only from one particular server.) In Terminal, type `sudo pico /sw/etc/apt/sources.list`. Then add the following lines of code to the end of the file paths inside that file:

```
deb http://fink.opendarwin.org/bbraun 10.3/unstable main crypto
deb http://fink.opendarwin.org/bbraun 10.3/stable main crypto
```

GEEK FAVORITES

Come Out of Your Shell



Can't get enough of scripting and want to learn more about the Unix shell? Flip through Dave Taylor's *Wicked Cool Shell Scripts: 101 Scripts for Linux, Mac OS X, and Unix Systems* ($30; No Starch Press, 2004). Inside, you'll find 101 customizable Unix scripts, for use in Mac OS X's Terminal, that help you create utilities, manage users, administer Web sites, and more.

These scripts, presented in the Bourne Shell (sh) syntax, will work on any OS X, Unix, or Linux system—but Taylor devotes one chapter to OS X scripts. Those six scripts can be used to control certain aspects of NetInfo, e-mail, users, Terminal, and iTunes.

You may not have thought of using shell scripts to track your stock portfolio, calculate loan payments, or quiz yourself on state capitals—but why should you let that stop you?—JONATHAN SEFF

Save the changes by pressing control-O, and then press control-X to return to Terminal's command prompt.

Now you're ready to download and install KDE itself. In Terminal type `sudo apt-get update; sudo apt-get install bundle-kde`. This allows Fink to update apt-get, which you'll use to simplify the process of acquiring Unix applications later. The command also instructs Fink to download KDE.

The 279MB file may take a bit of time to download, depending on your computer's speed and Internet connection. Once it's downloaded and installed, and you find yourself back to a command prompt, you'll need to add one more thing.

Create a .xinitrc file—a small script that will launch KDE every time you launch X11. To do this, type: `sudo pico -w ~/.xinitrc`. Then, once the document is open, add the following two lines:

```
source /sw/bin/init.sh
/sw/bin/startkde.
```

There! That wasn't so bad, was it?

Run, KDE, Run!

If all went well, KDE should open when you launch X11. On slower Macs, KDE might take a few minutes to start up. Don't worry, something *is* happening.

Before you dive in, make a few adjustments to ensure that everything runs smoothly. First, turn off KDE's desktop icons, via its preferences, so you can use your normal OS X desktop. (If you don't, the KDE desktop will replace your usual OS X desktop—making it unusable.)

Click on the large K in the lower left corner of your screen to access a pop-up menu. Choose Settings: Control Center. Next, expand the Desktop menu. Under Behavior, deselect the Show Icons On Desktop option.

You'll see something resembling the Dock, which in KDE is known as the *Kicker*. Since the Kicker is also at the bottom of the screen, you'll find it easier to use if you move the Dock somewhere else. Go to System Preferences: Dock to do this.

Prepare to Play

Now what? With KDE in place, you can run all kinds of free alternatives to various large commercial programs. Two of the most powerful examples are the Adobe Photoshop look-alike GIMP (www.gimp.org) and the Microsoft Office stand-in KOffice (www.koffice.org). (See "Image Editing on the Cheap.")

You can install GIMP in just a couple of steps. First, open KDE's version of Terminal, called Konsole, by clicking on the icon that sits between the wrench and house icons on the Kicker. Then type `sudo apt-get install gimp`.

The apt-get program is one of the most powerful things about Fink; it dramatically streamlines the process of installing apps that run in KDE. Once you type `apt-get`, you'll be prompted for the administrator password. If you're connected to the Internet, the program will download and install.

Once that's done, just type `gimp` in Konsole to launch GIMP. It's just as easy to install the Microsoft Word–compatible AbiWord word processor.

Open Konsole and type `sudo apt-get install abiword`. To find other programs that run under KDE, check out the Package Database site at http://fink.sf.net/pdb/.

Get Productive

As you explore, you might find that KDE's interface offers some advantages. For instance, I prefer to run another Office substitute, OpenOffice (www.openoffice.org), with KDE, instead of directly in Apple's X11. OpenOffice wasn't designed to make it easy to toggle between multiple documents at once, and KDE lets you get around this limitation by storing OpenOffice windows in the Kicker.

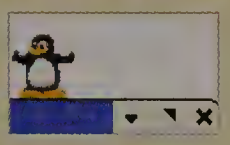
Also, since KDE has four virtual desktops, you can switch between different working environments with a single click. This comes in handy when you have many windows open and need a way to handle them all.

KDE is full of ways to both work hard and play hard. Take the time to experiment with it—the results may surprise you. □

CYRUS FARIVAR is a lifelong *Macworld* reader. From January 2004 through his graduation from UC Berkeley in May 2004, he was an editorial intern at the magazine.

ICON BY PAUL HOWALT

KDE's Kookier Side



Who says Unix geeks are all work and no play? Under the K menu, open the Toys folder to find the application called AMOR (Amusing Misuse of Resources). While this is running, you'll see small, animated icons—from a pair of wandering eyes to Tux, the penguin mascot of Linux—when you have KDE windows open. Click on Always On Top to make sure the animation comes up.

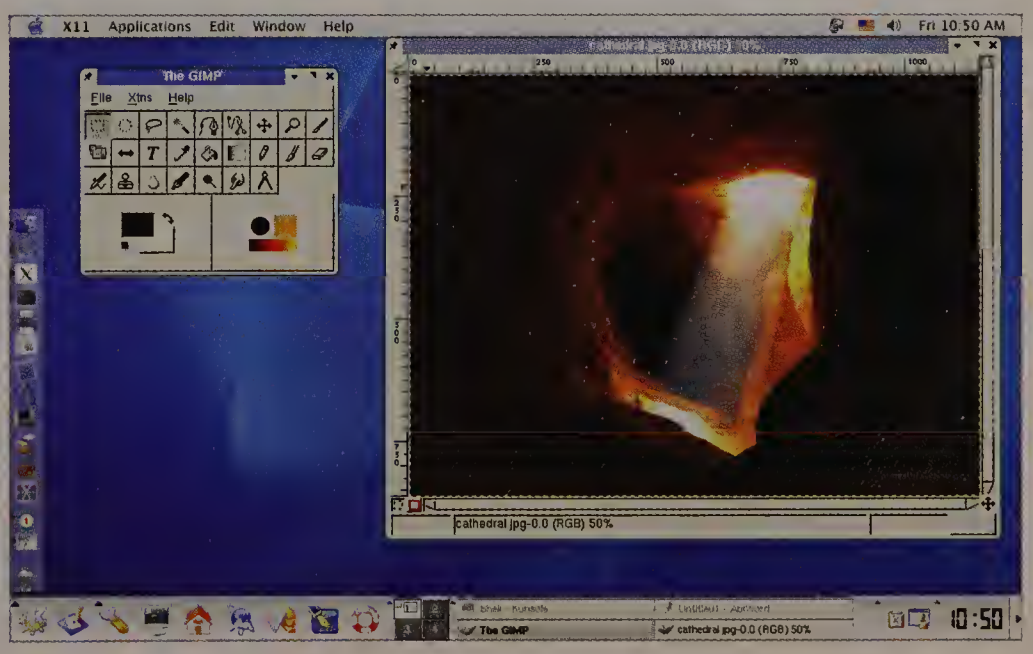


Image Editing on the Cheap KDE lets you use free open-source programs, such as GIMP, a Photoshop alternative. It also gives you four virtual desktops (indicated by numbers in the Kicker), making organization a breeze.

HELP DESK

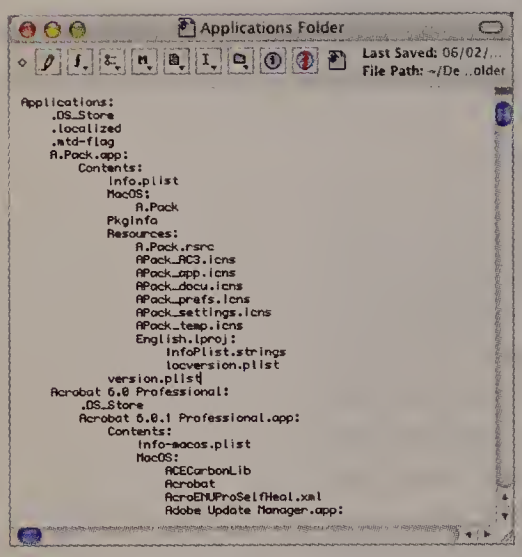
macosxhints@macworld.com

Mac OS X Hints

Discover how to find all of Word's keyboard shortcuts, speak selected text in any application, easily jump to any folder in Terminal via the Finder's sidebar, put iTunes' new arrows to a different use, and adjust Word's zoom using a scroll wheel.

List a Folder's Entire Contents

Have you ever wanted a list of a folder's contents (including all its subfolders), but without file size, creation date, and so on? You could use the Finder's List view to get at this information, but you'd be missing any hidden files—and it's not easy to print the results. You could also use Terminal, but that would require some specialized Unix knowledge. If you own (or download the 30-day demo of) Bare Bones Software's $49 TextWrangler or $179 BBEdit (www.barebones.com), you already have a drag-and-drop solution at your fingertips.



Explore My Folder Bare Bones Software's BBEdit and TextWrangler make it very easy to see everything (including normally hidden files) in any folder via drag and drop.

Launch either app, create a new document, and then drag the folder whose contents you'd like to see into the empty window. After a delay (which depends on the size of the folder and the speed of your Mac), you'll see the entire contents of the folder, in a nicely indented style (see "Explore My Folder"). This list will include any hidden files, such as those in your Home directory—and don't forget that you've just created a fully editable document, so you can add notes or remove items you don't want to view.

Learn All of Word's Keyboard Shortcuts

Microsoft Word is a powerful, complex word-processing application, with literally hundreds of predefined keyboard shortcuts. If you do a lot of work in Word, it's in your best interest to learn as many of these as possible—they can save you hours of work. Here's how to create a printout of all of Word's shortcuts to help with the process.

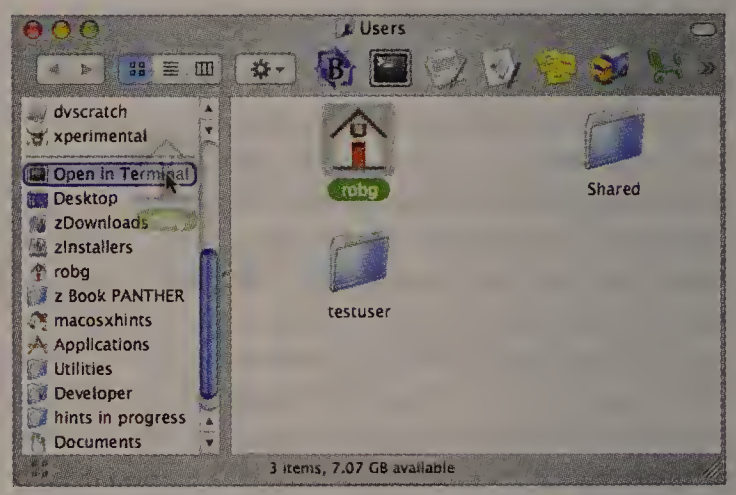
In either Word v. X or 2004, select Tools: Macro: Macros to open the macro dialog box. In the Macro Name field, type `ListCommands` and then click on Run (it doesn't matter what's selected in the Macros In pop-up menu). You'll be greeted by another dialog box—select All Word Commands, and then click on OK to start the macro.

After a bit of processing work, a new document will appear on your screen, listing every single Word command along with the associated keyboard shortcut(s). There are some real time-savers hidden here—for instance, did you know that ⌘-shift-comma (,) and ⌘-shift-period (.) will decrease and increase, respectively, the font size of the current selection?

Invoke Your Personal Reading Assistant

In Cocoa applications such as Apple's TextEdit, Mail, and Safari, you can select a block of text and then use the Services menu (Services: Speech: Start Speaking Text) to speak the selection. This can be useful when you're trying to proofread a long document, as typos will be revealed by their odd pronunciations. But what do you do if you, like many people, do your writing in Word, not TextEdit? Word, like most Carbon applications, doesn't support Services, so you appear to be out of luck—and prior to OS X 10.3, you were.

If you're running Panther, open the Speech preference pane and click on the Spoken User Interface tab. In the Other Spoken Items section, check Selected Text



Drag-and-Drop Terminal Drag and drop a folder onto this sidebar item, and Terminal will open with the dropped folder as its working directory.

Zoom Through Word

A great time-saver in Word is mouse-based document zooming (assuming you have a third-party mouse with a scroll wheel, of course). Instead of using the View: Zoom menu item, or clicking in the Zoom pop-up menu in the toolbar, save yourself some mouse motion and hold down the control key while you move your scroll wheel—up (forward) increases the zoom, while down (backward) decreases the zoom.

When The Key Is Pressed, and then click on Set Key to assign a keyboard shortcut (control-shift-S, for instance). Close the pane when you're done.

Since you've just invoked a system-level preference, you can now select a block of text in any application. Press your hot-key combination, and listen to your machine's default voice read the selection. If you tire of that particular voice, visit the Default Voice tab of the Speech preference pane and select another voice from the list—Vicki and Victoria are both easier to understand than poor old Fred.

Switch the Sort Column via the Keyboard

Did you know that you can control the active sort column in list-view windows without touching the mouse? Control-tab and control-shift-tab will cycle right and left, respectively, through the various column headings, re-sorting the view as each new column is highlighted. Unfortunately, you can't switch the sort order (ascending or descending) via the keyboard—for that, you'll have to reach for your mouse.

Quickly Open Any Folder in Terminal from the Finder

If you do much work in Terminal, you're probably used to the Finder shuffle—what happens when you're working many levels down in your folder hierarchy in the Finder, and realize you need to open the folder in Terminal. So you switch to Terminal, type `cd`, press the spacebar, switch back to the Finder, and then drag the desired folder into the open Terminal window. (You could, of course, type the full location of the folder, but if it's buried very deeply, that would be quite tedious.)

If you do this a lot, you might prefer an easier solution. First, download the Open In Terminal script from find.macworld.com/0015 and place it somewhere safe (where you won't accidentally delete it). Now drag this script into your sidebar, Dock, or toolbar. From now on, when you want to jump to a given folder in Terminal, just drag and drop the folder onto the script shortcut you created (see "Drag-and-Drop Terminal").

To make your new shortcut look more at home in the sidebar, give it a custom Terminal-style icon. Find a free one you like at Xicons (www.xicons.com) or The Iconfactory (www.iconfactory.com), and then copy and paste it onto your script using the Get Info dialog box.

Change the Behavior of iTunes 4.5 Arrows

When Apple released iTunes 4.5, it added an interesting new feature: little arrows next to items in the Song Name, Artist, and Album columns, just like those used in the iTunes Music Store (see "Arrows Everywhere"). Clicking on an arrow takes you to the corresponding matches in the Store. Although this is a neat way to link your library with the Store, wouldn't it be better if those same links could take you to matches in your own library? If they did, you could quickly jump from a song to the album containing the song, or to the artist who recorded the song. Luckily, some Apple engineers felt the same way and included a couple of hidden features to make that possible.

The first trick is to use the option key—if you hold it down before you click on an arrow, iTunes will enter Browse mode and act as though you entered the info in the Search box. If you find that behavior ideal and would like it to be the default, you'll need the second trick. Quit iTunes, open Terminal, and type `defaults write com.apple.iTunes invertStoreLinks -bool YES`.

When you launch iTunes, you'll find that a click on an arrow now takes you to your library, and an option-click takes you to the Music Store. If you ever want the original behavior, quit iTunes and rerun the command just mentioned, replacing `YES` with `NO`. □

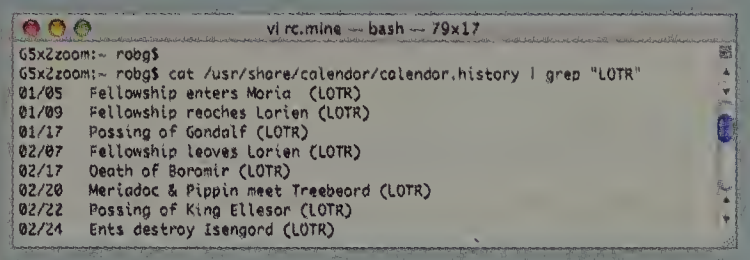
Contributing Editor ROB GRIFFITHS is the author of *Mac OS X Hints, Jaguar Edition* (O'Reilly, 2003) and runs the Mac OS X Hints Web site (www.macosxhints.com).

UNIX TIP OF THE MONTH

Lord of the Rings History

So you're a huge *Lord of the Rings* fan—you've read all the books, you've seen all the movies numerous times, and you own multiple versions of the various DVD releases. But even with all that knowledge, you probably didn't know you could also study up on your *Lord of the Rings* history right in Terminal, did you?

Open Terminal and type `cat /usr/share/calendar/calendar.history | grep "LOTR"`. When you press enter, you'll see a list of key dates in the *Lord of the Rings* saga (see "Tolkien Treat"). Of course, since the order of the events is based on the displayed date, not their actual sequencing, you'll have to use your knowledge of Tolkien's masterwork to put them in the proper order.



Tolkien Treat Fans can get a quick summary of Lord of the Rings events right in Terminal.

Arrows Everywhere You can easily change the behavior of iTunes' arrows in version 4.5 or later.

ICON BY PAUL HOWALT

HELP DESK

mac911@macworld.com

Mac 911

Just as you might be surprised to learn that a cappuccino maker can double as a steam cleaner, you may be astonished by the underconsidered capabilities of the Mac and its applications. This month's *Mac 911* examines the lesser-known aptitudes of iMovie's titles and transitions, GarageBand's effects, and TextEdit's page-layout properties.

iMovie Click Tricks

How do I change the position of titles in Apple's iMovie? Except for the subtitle effect, which appears along the bottom of the screen, titles are in the middle of the frame.

From the Macworld.com forums

You can change where some titles appear by clicking on the title in the Preview window and dragging it to a new location—from the middle of the window to the bottom, for example. To find out which titles support this feature, move your cursor into the Preview window after you've selected iMovie's Title tab. If the cursor changes to a crosshair, you can modify the title's location.

This trick also works with iMovie's Scale Down transition and a few effects. Select Scale Down, and then click anywhere in the Preview window and the effect will scale down to that point. Click in the Preview window to change where the Electricity, Fairy Dust, and Lens Flare effects occur.

Fill Up the Garage (Band)

In GarageBand, how do I take a single instrument and make it sound like an entire section of the same instrument playing at once?

Anthony K. Welch

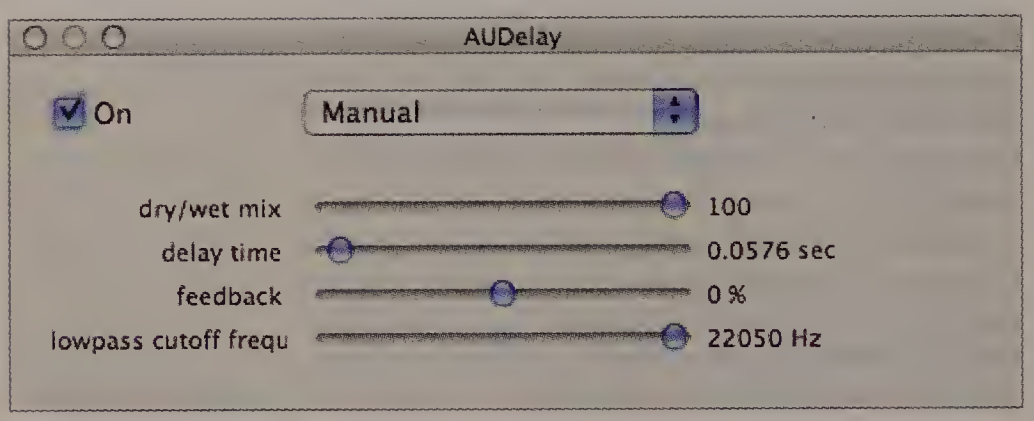
Don't add multiple iterations of the same track—you'll just use a load of CPU cycles to produce a sound no richer than that of the original track. Instead, slightly change one track's position in time or alter its *timbre*, or tonal character. Moving its position in the stereo field after making these kinds of adjustments will also help distinguish each track. Here's how you go about it:

Place two copies of the same track in GarageBand. Pan one all the way to the left and the other all the way to the right. Double-click on the name of a track to bring up the Track Info window. Click on the Details triangle to reveal the track's effects.

From the first pop-up menu, which reads None, select AUDelay and click on its Edit button. In the resulting AUDelay window, push the Dry/Wet Mix slider all the way to the right for a setting of 100—this ensures that you'll hear nothing but the affected sound. Change the Delay Time to 0.0576 seconds to delay that instrument slightly. Set the Feedback slider to 0%, and move the Lowpass Cutoff Frequency slider all the way to the right, to 22050 Hz (see "Delaying Tactics"). You'll now hear two distinct instruments coming from the mix's left and right channels.

To make those sounds more dissimilar, enable the Equalizer effect and try the preset equalizer settings available from that effect's pop-up menu. By cutting or accentuating the sounds' highs or lows, you can make one track sound like a second instrument.

Delaying Tactics
With GarageBand's effects, you can make a single instrument sound like an ensemble.



UNSOLICITED ADVICE

Recover iTunes Playlists

A Macintosh troubleshooting consultant of my acquaintance recently called with a head-scratcher. A client of his had lost the contents of his iTunes library. Fortunately, he had a copy of all the songs from that library on his iPod. Now, any number of utilities can extract songs from an iPod and copy them to a Mac, but the twist was that his client required not only the songs originally found in his iTunes library, but the playlists as well—he'd carefully created dozens of them to reflect the work of a composer whose biography he was writing.

Regrettably, there's no file on the iPod—visible or otherwise—that you can export to your Mac to re-create an iTunes library with playlists intact. We therefore turned to the Web and found crispSofties' iPod.iTunes 2.5.5 (29.90 euros; www.crispsofties.com/i.i/index.html). Unlike other utilities I've used, iPod.iTunes can synchronize the contents of an iPod and its playlists to iTunes and accommodates both MP3 and AAC files (protected and unprotected).

Photos in TextEdit

I'm trying to create a resume in TextEdit that includes a photo. Is there an easy way to do this?

From the Macworld.com forums

Sure, just open TextEdit and select Make Rich Text from the Format menu. With Rich Text Format switched on, TextEdit supports graphics (with Plain Text it doesn't). To place a graphic in your file, either copy it to the Clipboard from another application (a graphics program or Preview, for example) and then paste it in, or drag it into the document.

You can use the Alignment controls to shift it hard left, hard right, or into the center. Alternatively, you can use tabs and spaces to position it.

Calling All Calendars

I appreciate that I can publish my iCal information to .Mac so I can view it from work, but I'm constantly frustrated that I can publish only one calendar at a time. Is there any way to publish all my calendars to one .Mac page online?

Samantha Mortlock

You'll have to publish your calendar as a graphic on your .Mac home page. Here's how:

Launch iCal, select the view you want to publish—Month, for example—and enable all the calendars you want to appear on the page. Select Print from the File menu to call up the Print dialog box. In the pop-up menu labeled Copies & Pages, select iCal, deselect the Print To Do Lists and Print Mini-Months options, and click on Save As PDF. Haul the resulting PDF document into Preview, select Export from the File menu, export it as a JPEG file, and give it an intuitive name such as Calendar.jpg.

Mount your iDisk, create a new folder within its Pictures folder, and call it Calendar. Copy the JPEG file into this folder. Zip over to your .Mac home page, click on the Photo Album tab, and click on a frame you like. In the resulting HomePage window, navigate to your calendar folder and select your Calendar.jpg file. Publish that picture and note its address so that you (or your nearest and dearest) can visit it later.

When you access this address, you'll see a thumbnail of your calendar. Click on it to view the exploded version. Repeat these steps to produce additional calendar pages.

Of Platforms and Peripherals

What programs or adapters enable the use of PC hardware on an iMac?

Via the Internet

There are many USB or Bluetooth keyboards, mice, printers, and scanners that work on both platforms. Check with other Mac users in places such as Macworld.com's own forums (www.macworld.com/forums) to see which devices are fully compatible with the Mac.

ICONS BY PAUL HOWALT

TIP OF THE MONTH

Announce iCal Events

In iCal I wanted to schedule an e-mail alarm for a recurring event to send to myself and a group of people who routinely attend this event. The program's Invitation feature doesn't allow me to add information to the invitation, nor can I schedule a time to send the invitation. I came up with this workaround:

I launched Address Book, selected my card, and chose Make This My Card from the Card menu. I then added e-mail fields and placed the addresses of the people in my group into those fields.

From there I switched to iCal, selected the recurring event, opened the Info pane, and chose Email from the Alarm pop-up menu. I selected a name from the list of addresses connected to my Address Book card and chose when I wanted the e-mail to be sent—six hours before, for example. To add other names, I clicked on the Alarm heading and chose Add Alarm. In the resulting alarm entry, I selected another e-mail address entered on my Address Book card.

To complete the custom announcement, I wrote the additional information in the Notes field along with the start time of the event. (Whatever you enter into the Notes field appears in the message text, and e-mail alarms don't include the event's start time.)

Dennas Davis

Don't be concerned if your iMac doesn't have Bluetooth built in. You can add Bluetooth to your computer with D-Link's $40 DBT-120 Wireless USB Bluetooth Adapter (800/326-1688, www.dlink.com).

Your iMac may even be able to print to an older printer that has only a parallel port. First go to http://gimp-print.sourceforge.net/MacOSX.php3 to find out if the printer is compatible with the free Gimp-Print and Ghostscript drivers. If it is, download and install Gimp-Print and Ghostscript, buy Keyspan's $39 USB Parallel Printer Adapter (510/222-0131, www.keyspan.com), and install Keyspan's Keyspan-USBPrint software. Then you'll be set.

Address Book to Entourage

I need to move contacts from OS X's Address Book to Microsoft Entourage X. In "Corral Your Contacts" (*Working Mac*, February 2004), you say it's easy using the vCard capabilities of both programs. I did that for each contact in a five-person group and it was super. But I have more than 500 contacts.

Richard J. Patterson

Your observation that Entourage imports only single vCards is correct. Fortunately, there's a way around the problem. Paul Berkowitz's $19 Sync Entourage-Address Book 2 AppleScript (http://macscripter.net/scriptbuilders/category.php?id=1640) lets you import a slew of Address Book contacts simultaneously. This script synchronizes all Entourage fields to Address Book (and vice versa) and makes allowances for fields that don't correspond. For example, unmapped Entourage fields are placed in Address Book's Notes area, and Address Book's Instant Messenger fields are mapped to Entourage's Custom fields. □

Contributing Editor CHRISTOPHER BREEN is bloggin' with the best of 'em. Check out his Mac 911 Weblog at www.macworld.com/weblogs/mac911.

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Videopart	xt-stand.com	38
Wiley & Sons	wiley.com	23
Xerox Office Group	xerox.com/office/1965	2-3

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HARDWARE		
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17	Medea	-
MISCELLANEOUS		
22	Avid Technology	39
57	Bose Corporation	-
21	CDW	2
85	Dr.Bott	-
8	Fujitsu	-
14	Griffin Technology	-
C4	La Cie	-
41,43,45	Powermax	-
39	Intego	86
27	Small Dog Electronics	-
38	Videopart	-
PRINTERS		
2-3	Xerox Office Group	101
SCANNERS & DIGITAL CAMERAS		
C3	Nikon Electronic Imaging	-
SOFTWARE		
BUSINESS/PRODUCTIVITY		
13	Microsoft Office	-
42	Rascal Software	-
20	SailAlong Software	-
35	Software MacKiev	-
ENTERTAINMENT		
34,48,53,54	Aspyr Media	91
51	MacSoft	148
MULTIMEDIA		
23	Wiley & Sons	-
UTILITIES		
46-47	Alsoft	141
25	MicroMat	37
MAIL ORDER		
101	Broadway Photo	-
100	ClubMac	98
96-97	MacConnection	-
98-99	MacMall	132
102-105	Otherworld Computing	-
SERVICES		
TRADESHOWS/CONFERENCES		
6-7	Geek Cruise	-
40	Seybold Seminars	78
INTERNET PRODUCTS/SERVICES		
33	Apple Specialist Mark. Co-Op	-
12	The Inside Mac Show	12

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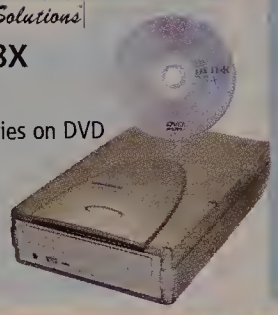

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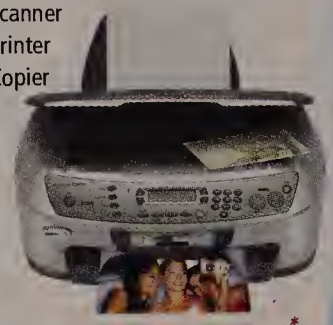

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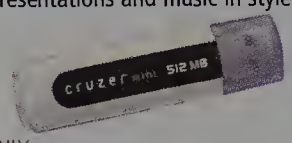

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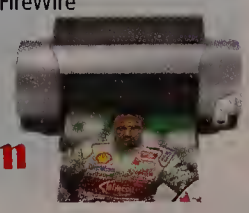

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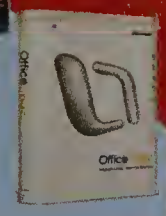

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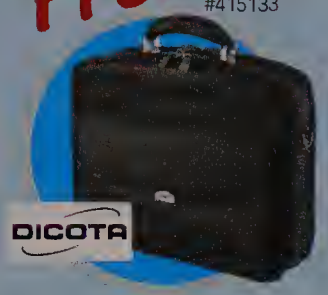

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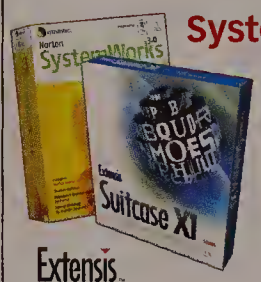

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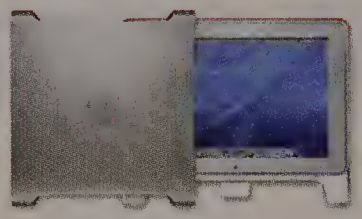

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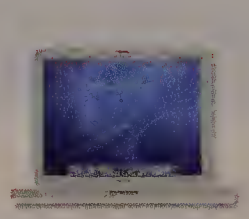

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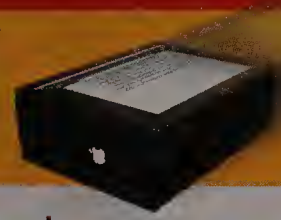

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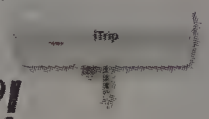

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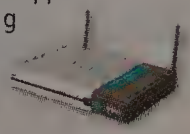

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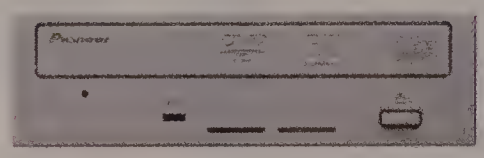

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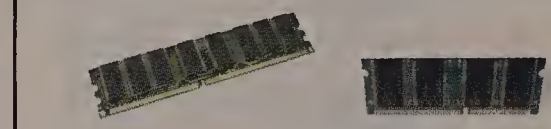

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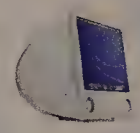
eMac G4



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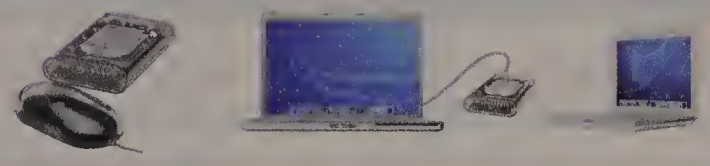
OWC FireWire & USB - *High performance plug & play*

Macworld ★★★★½ · MacAddict: "DroolWorthy" · dantz · MacAddict RATED ○○○○○ GREAT · Photoshop User ◆◆◆◆◆ · MyMac.com · Macworld ★★★★ · MacSolo ☆☆☆☆☆ · GEAR YEAR

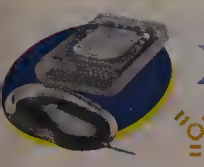
Top rated OWC FireWire/USB for additional storage, backup, A/V, music & more!

OWC Mercury Elite Pro the sleek, compact solution that stands or stacks.

OWC Mercury On-the-Go high-speed drives "fits in a pocket" size



2.5" On-The-Go FireWire Solutions



Weighing less than 12 Ounces, and able to be bus powered or powered with included AC Adapter, the OWC On-The-Go Portable Storage offers convenience + high-speed too!

MAXIMUM PC 9 out of 10 · GEAR YEAR 2003 · Photoshop User ◆◆◆◆◆

MacAddict 'Droolworthy'

Mercury On-The-Go	FireWire 400	FW400 + USB 2.0/1.1
20GB 4200rpm 8MB Data Buffer	$139.97	$149.99
40GB 4200rpm 8MB Data Buffer	$169.97	$179.99
40GB 5400rpm 16MB Data Buffer	$189.97	$199.99
60GB 4200rpm 8MB Data Buffer	$199.97	$209.99
60GB 7200rpm 8MB 'Fastest Ever!'	$299.97	$309.99
80GB 4200rpm 8MB 'Highest Capacity!'	$259.97	$269.99
80GB 5400rpm 'Highest Capacity!'	$289.97	$299.99

Call or Visit www.macsales.com/firewire for other 20-80GB models. All Mercury On-The-Gos are Apple HFS+ Preformatted and include Dantz Retrospect Express Backup Utility(Mac/PC), Intech HD Speedtools(Mac), all cables, AC Power Supply, and a 1 Year OWC Warranty.

OWC Neptune FireWire 400 Solutions

OWC Neptune *Value done right.*

Features the same Oxford911 bridge as our highly acclaimed Elite Pro for all the performance and a value that can't be beat!

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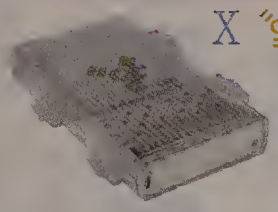
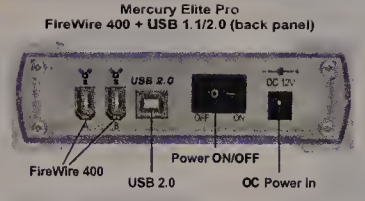
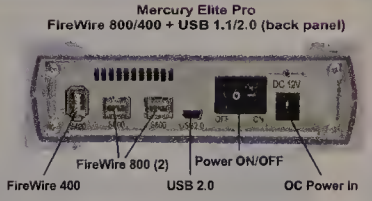
120GB 7200RPM 2MB Data Buffer	$139.99
160GB 7200RPM 2MB Data Buffer	$149.99
200GB 7200RPM 8MB Data Buffer	$199.99
250GB 7200RPM 8MB Data Buffer	$249.99

Neptune FW Solutions include Dantz RetroSpect Express backup software (Mac & PC), Intech Speedtools (Mac), all cables, 1yr OWC Warranty

OWC Mercury Elite Pro storage solutions







All Mercury Elite Solutions are Apple HFS+ Preformatted Ready to go and include Dantz Retrospect Express Backup Utility(Mac/PC), Intech HD Speedtools(Mac), all cables, and a 2 Year OWC Warranty.

Mercury Elite Pro	Data Buffer	FW 400/USB	FW 800/400*	FW800/400/USB
80GB 7200RPM	2MB	$149.99	$179.99	$189.99
120GB 7200RPM	2MB	$179.99	$N/A	$209.99
120GB 7200RPM	8MB	$189.99	$199.99	$219.99
160GB 7200RPM	8MB	$189.99	$219.99	$239.99
200GB 7200RPM	8MB	$229.99	$249.99	$269.99
250GB 7200RPM	8MB	$299.99	$319.99	$339.99
400GB 7200RPM	8MB	NEW	CALL	NEW

300GB or higher, call or visit www.macsales.com

* Elite 800 Pro Fw800/400 solution has same ports as pictured FW800/400 + USB model - except the USB 2.0 port

Read/Write-Burn CDs and DVDs for backup, movies, music, video & more!

You can use Apple iTunes/Discburner, Toast, or just about any CD/DVD authoring software available!

52x CD-R Write / 32x CD-RW re-writable / 52x CD read

OWC Mercury Pro FW400 + USB 2.0/1.1 $109.99

Neptune FW400 $95.99

Mercury Pro and Neptune CD-R/RW models include Dantz Retrospect Express Backup Utility(Mac/PC), all cables, 25 Pieces 52X CD-R Media, and a 1 Year OWC Warranty

SuperDrive DVR-107 DVD+/-R, RW up to 8x, CD-R/RW 24x

OWC Mercury Pro FW400 + USB 2.0/1.1 $189.99

Neptune FW400 $175.99

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* FireWire 800 and USB 2.0 operation require Apple OS X 10.2.x or later.

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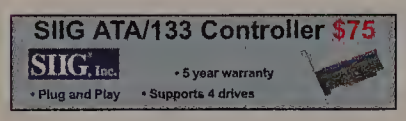
Hard Drive Controller Cards

Use Serial ATA hard drives or bigger, faster ATA drives with a new PCI hard drive controller



Sonnet Tempo Serial ATA/150 Controller $87.99

FirmTek SeriTek ATA/1S2 Serial ATA/150 Controller $59.99

Build your own FW/USB drive

Case kits include all connecting cables and driving mounting screws

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Use any 3.5" IDE/ATA hard drive up to 500GB!

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Use any capacity 2.5" IDE/ATA drive

FireWire 400 Kit $79.99
FireWire 400 + USB 1.1/2.0 Kit $89.99

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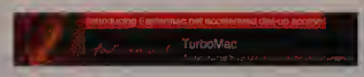

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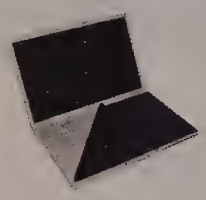
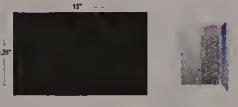
The OWC LSPs are precision cut, glove soft leather protectors that prevent potentially permanent marks which can occur from the trackpad and keyboard while your laptop is closed.



Stops marks!

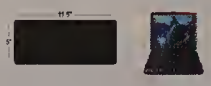
OWC LSP products:

PowerBook G4 17" $17.99



PowerBook G4 15" $15.99

PowerBook G3s $14.99



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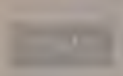

ElGato EyeTV USB $159.00
ElGato EyeTV 200 $349.00
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KVM switches from $49.95 - Use one keyboard / mouse / display to control multiple Macs!

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Make your own DVDs from Television, Camcorder, VCR Tapes, any Composite/S-Video + Audio source with ease! Save TIME and Hard Drive space too since Instant DVD hardware encodes MPEG2 REAL-TIME so you don't have to do the DV to MPEG2 with your computer! Instant DVD is the EASIEST way to convert your video library to DVD!

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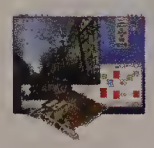
Miglia Alchemy TV Tuner + DVR PCI card w/Remote $147.99



AlchemyTV DVR features a scheduled recording functionality allowing you to program the time and date for your recordings in a few easy steps. Your favorite TV program will be recorded onto your hard drive for later viewing or export to VCD or DVD.

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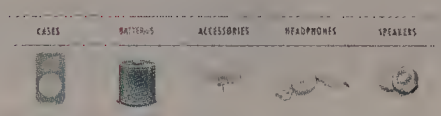

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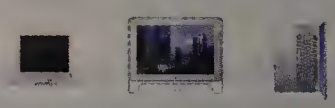

Apple Polish 2 Stage iKlear, 10 for $7.50
Power Klean LCD kit (1500 cleanings) $23.99

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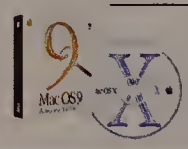
4.5v Mac P-RAM Battery $7.99



Apple OS X from $8.95
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OWC Mercury G4 Extreme

For early G4 systems

Macworld Oct '03 — MacHome Oct '03

MyMac 5 out of 5 — MacAddict - 'Great'

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Call for new Mercury Extreme duals

- *Plug and play with all PowerMac G4 models 100/133 bus 350MHz to 1GHz (except Cube)*
- *Preinstalled cross-air heatsink means cool running and easy installation*
- *Large 2MB cache means even more speed!*
- *100% Compatible w/ all Apple Software & OSs'*
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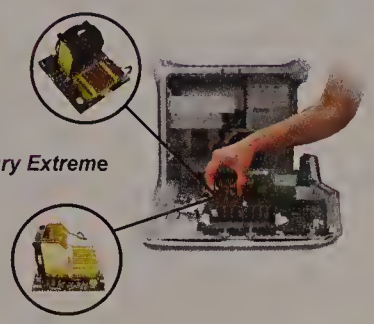
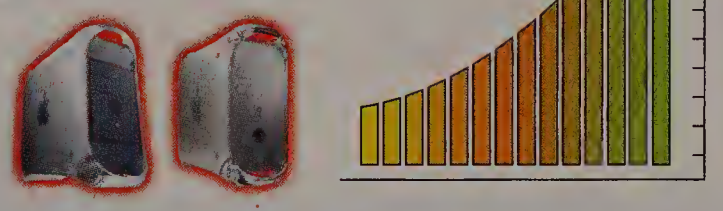
1 Factory Apple G4 performance

2 Install *OWC Mercury Extreme* and restart



3 Get *OWC Mercury Extreme* performance up to 1.5GHz!



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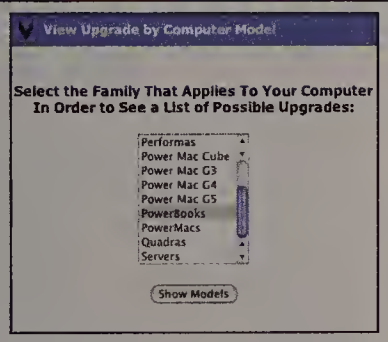
Our online guide shows what we have just for your Mac!



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Get OS X from only $9.99!

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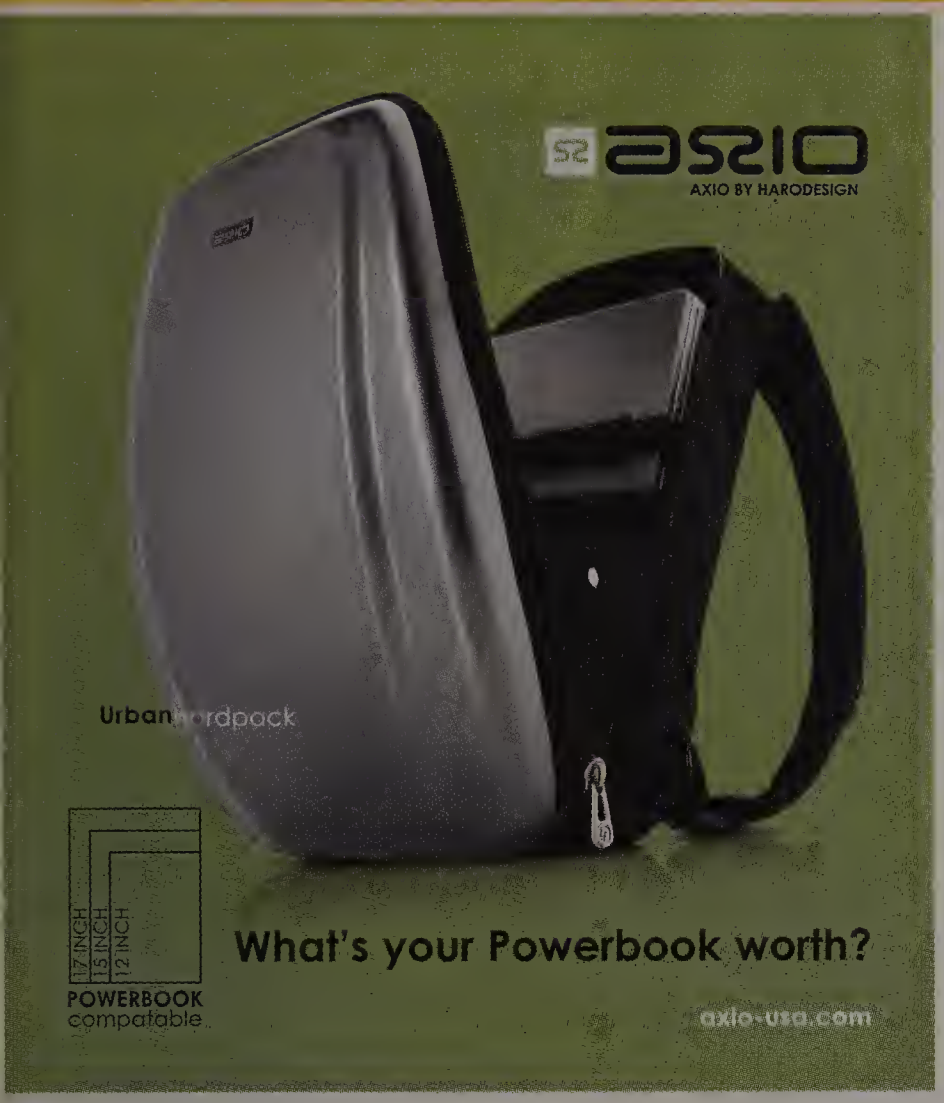

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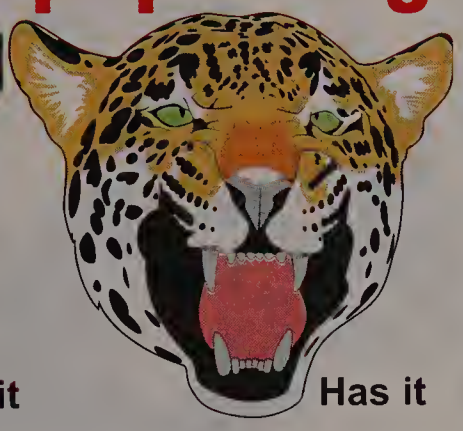

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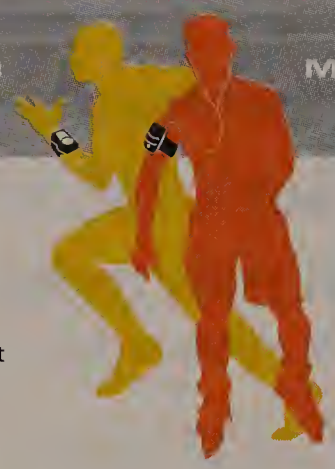

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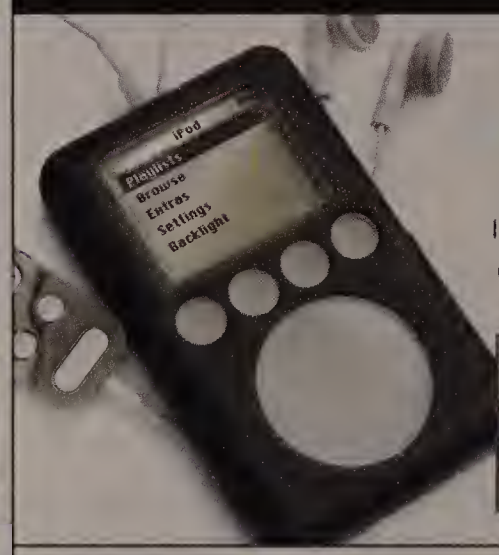

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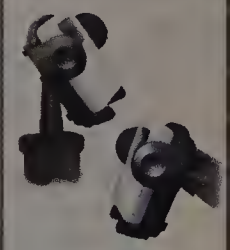

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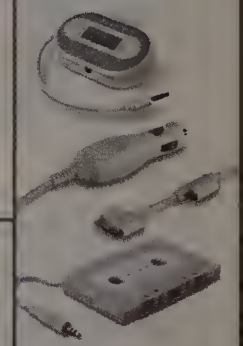

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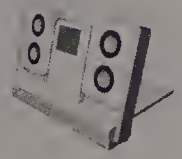

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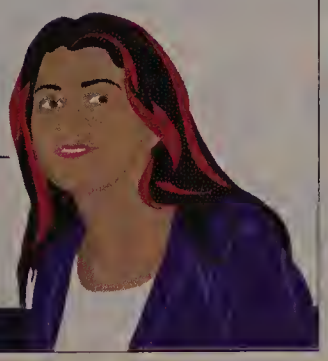

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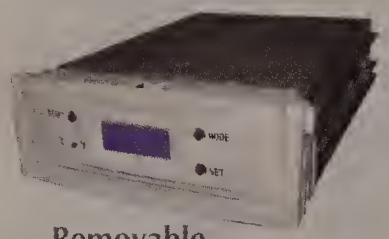
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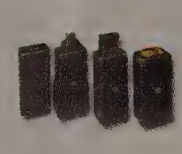
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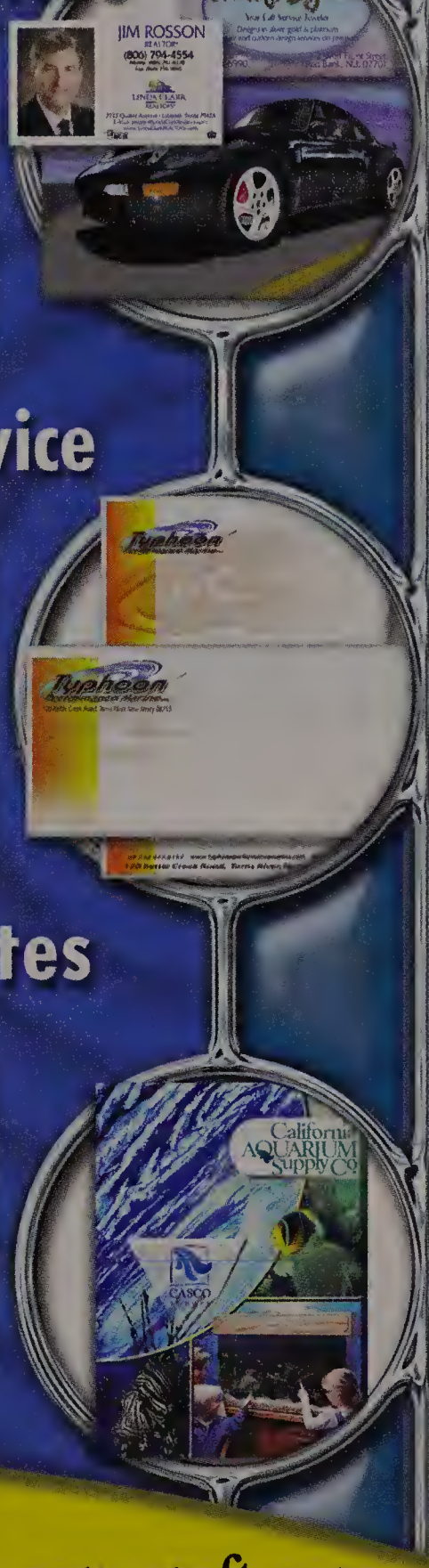

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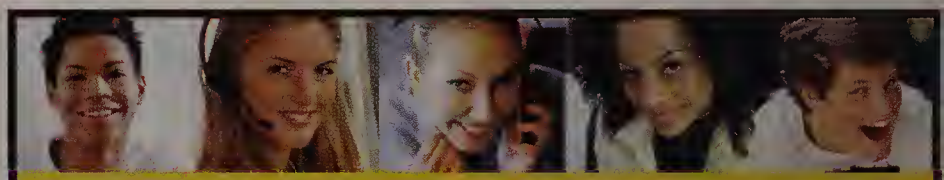

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1000	159	219
2500	219	279
5000	339	379
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QTY.	4/1	4/4
1000	39	49
2500	62	69
5000	99	99
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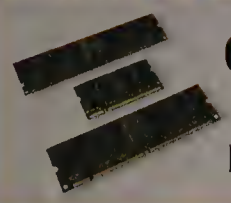

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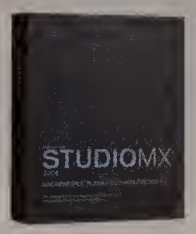

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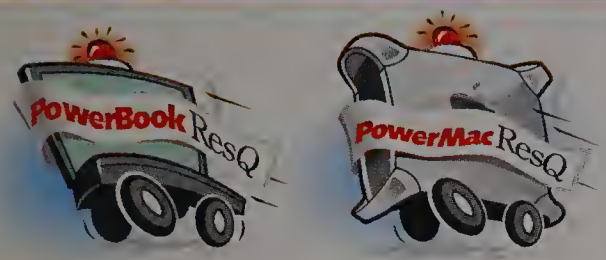

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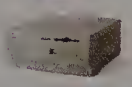

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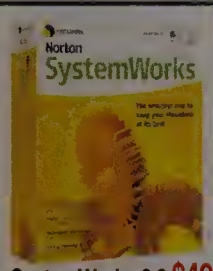

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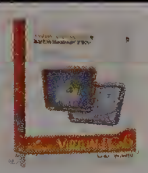

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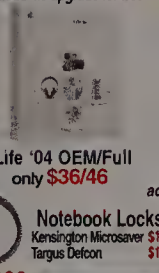

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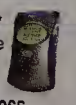

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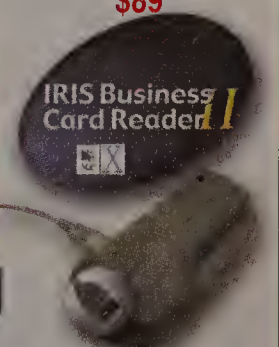

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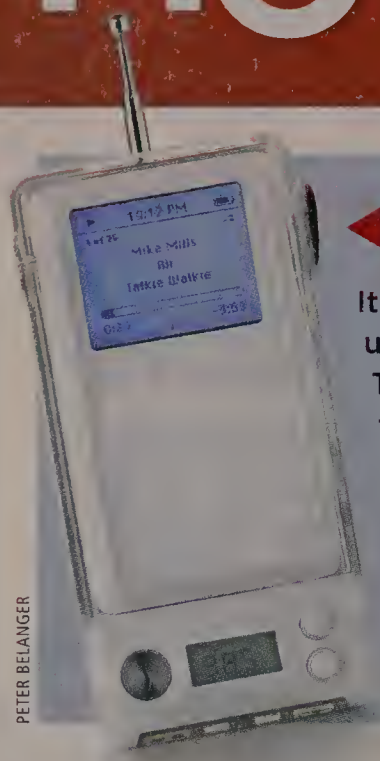
The Month's Coolest Developments

FROM THE EDITORS OF MACWORLD



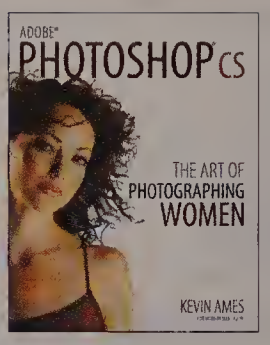
PETER BELANGER

PODFREQ

It's easy to understand why FM transmitters have become the accessory of choice for iPod users on the go—these attachments allow you to play your iPod library over your car radio. Trouble is, too many FM transmitters make it sound as though your music is broadcasting from a boat several miles into international waters instead of an iPod several feet away. Cutting through this noisy dilemma is the PodFreq, one of the newest FM transmitters and also one of the best. Designed by Sonnet Technologies to fit dockable iPods perfectly, the $100 PodFreq features an easy-to-use interface, minimal power requirements, and a USB 2.0/FireWire port for charging or syncing your iPod. More important, its telescoping antenna produces a crisp signal that comes through loud and clear whether your iPod is riding shotgun or just along for the ride in the backseat (www.sonnettech.com).

You Control

Power tweakers who live to create custom menus have found their dream tool in You Software's You Control (★★★★; April 2004). The $70 utility features modules for building menus to display news feeds from your favorite Web sites, up-to-the-minute weather reports, or stock prices. You can also display the contents of a specific folder, manage your calendar, assign hot keys to any menu item you create, and even control iTunes. Trying a few modules at once will give you a feel for what this utility can do. Think of it as the ultimate menu-construction kit (www.yousoftware.com).



Beauty, Unfiltered

Kevin Ames's new book *Adobe Photoshop CS: The Art of Photographing Women* (Wiley, 2004) shows us just how those physically flawless women in magazines got that way—not through plastic surgery or endless trips to the gym, but through extreme makeovers performed by a Photoshop expert. Ames's skills are impressive, but we found what the book says about our ideas of beauty unsettling.

WHAT'S HOT

A Quick Look at the World of Macs

1. **Apple creates new Hardware and iPod divisions.** *Steve Jobs settled on* Hardware *and* iPod *divisions after considering an organizational split between "shirts" and "skins."*
2. **The iTunes Music Store wins two Webby Awards.** *And the honors keep coming—for Father's Day, Steve Jobs received a coffee mug recognizing him as World's Greatest Dad.*
3. **Steve Jobs is among the campaign advisers for presidential candidate John Kerry.** *Jobs's advice to the senator: voters love free iPods.*
4. **Apple plans to slow down the pace of OS X updates after it releases Tiger.** *"Quite frankly," says Chief Software Technology Officer Avie Tevanian, "we're running low on really cool cat nicknames."*

MAC SPOTTING

Sorry, Mac haters—those aren't real vultures circling over this iPod billboard on the Marina Freeway in Los Angeles. Instead, the simulated scavengers are part of an advertisement for cable TV's Animal Planet on the opposite side of the billboard.

BILLBOARD PHOTOS BY PHILIP MICHAELS

NETWORK PLAY ON HALO

Playing games against computer opponents can be fun, but taking on flesh-and-blood people is simply better. And no game in recent memory offers as big a kick when played on a network as MacSoft's $50 Halo (★★★★½; February 2004), which features numerous challenges beyond just mowing down your opponents. One game of team Capture the Flag or Oddball, and you'll be hooked (www.macsoftgames.com).

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